

Chapter One: National Origins, 1608-1866

Within a 200-mile radius of the twin cities of Minneapolis and St. Paul are the headwaters of the three major drainage systems of the North American continent. The northeast section of this region is dominated by Lake Superior, the inland terminus of the 2,300-mile Great Lakes and St. Lawrence waterway to the Atlantic Ocean. To the northwest, the Red River of the North begins its flow on the present-day Minnesota-North Dakota border, terminating after 1,200 miles in Hudson Bay. In the heart of the region, is, of course, the Mississippi River which begins at Lake Itasca and flows for 2,348 miles through the center of the United States, southward to the Gulf of Mexico.¹

Human settlement in this region has been closely tied to these three water systems and the many lakes, harbors and streams which are a part of each drainage network. Access to the world through these transportation and communication routes to Hudson Bay, the Gulf of Mexico and the Atlantic Ocean has given the inland inhabitants of this region a cosmopolitan character from the time of early Indian habitation to the present.²

The Indians who lived within this headwaters area came from two linguistic families, the Algonquian and the Dakota or Sioux. One group of Sioux, the Assiniboin, centered around Lake Winnipeg and the Red River of the North and its tributaries. More southerly bands of Sioux gathered near Lake Mille Lacs in central Minnesota. Tribes of the Algonquian family spread westward from the St. Lawrence River to the Great Lakes and were known in the Lake Superior area by such names as Chippewa (Ojibway), Sauk, Fox, Cree and Menominee. While the Indian tribes lacked such technological tools as a written language, the wheel, the horse and the plow, the Algonquian had the birchbark canoe, a device superbly designed for travel on the many rivers and portages of the northern waterways.

The three major drainage systems of the North American continent have their origins within a 200-mile radius of Minneapolis and St. Paul.

Indian culture was in awe of nature; Indians did not aim to exploit, develop or deplete it. Indian technology was designed to satisfy the immediate, transient needs of



The first Europeans utilized the Native American technology of water transportation in setting up a vast system of commerce and trade.

individuals, but the Indian way of life was modified by Europeans who came into the region early in the seventeenth century. The French penetration of the Upper Mississippi Valley was much different than the English colonization of the eastern seacoast. The French traded horses, firearms, liquor, textiles and other manufactured goods for furs, but they were content to leave the land in the possession of the Indians and their culture.³

In the next two hundred years, first the French, then the British and finally the Americans came to dominate the region. All recognized the vital importance of the waterways. During successive stages of exploration, colonization and urbanization, the waterways were main channels for transporting goods and for spreading European technological achievements and cultural values. In the beginning Europeans used the Indian canoe, and the canoeman, the part European, part Indian employee, sang, paddled and portaged his way into the far parts of the New World. This voyageur came to symbolize the fur trade, the first European economic enterprise to thrive in this inland empire.⁴

The French Inland Empire 1608-1763

One of the more dramatic success stories of human history is that of the French penetration of the heart of the North American continent. While small English settlements were merely surviving on the fringe of the Atlantic, the French were organizing an immense empire stretching from the St. Lawrence River to the Rocky Mountains, from Hudson Bay to New Orleans. In less than a century, following Samuel de Champlain's first settlement of Quebec in 1608, large parts of the interior were explored, mapped and linked in an effective metropolitan system of commerce and trade.⁵

The French established a successful alliance with the Algonquian tribes, and built trading posts, mission stations and military forts through the interior along inland waterways as part of their metropolitan system.⁶ Urban centers, first Quebec and later Montreal, on the St. Lawrence became focal points of their influence.⁷ By the time Detroit (1701) and New Orleans (1718) were established, the French system had spread from Louisbourg at the mouth of the St. Lawrence to Kaministiquia on Lake Superior in the west. After 1748 the French extended their system into the Ohio River Valley, a region blocked to their penetration earlier by the hostility of the Iroquois Indians.

Along busy aquatic trade routes during the French regime furs from the Indians were gathered and sent out and goods from Europe were brought in. It was a steady, orderly movement, planned and channeled in regular course. The whole system began to function with spring thaws in the rivers and lakes. It grew to full force by late summer, and trickled to a halt when winter weather froze the distribution lines.

A large population was not necessary to the functioning of this system. The French interior empire after fifty years only numbered about 3,500 inhabitants and by 1713 it was less than 20,000 people.⁸ Yet French-Canadians remained a dominant force in the economic life of the region for many years after the French lost title to the land. The geographic factors which made this first European governance a success have continued to influence the development

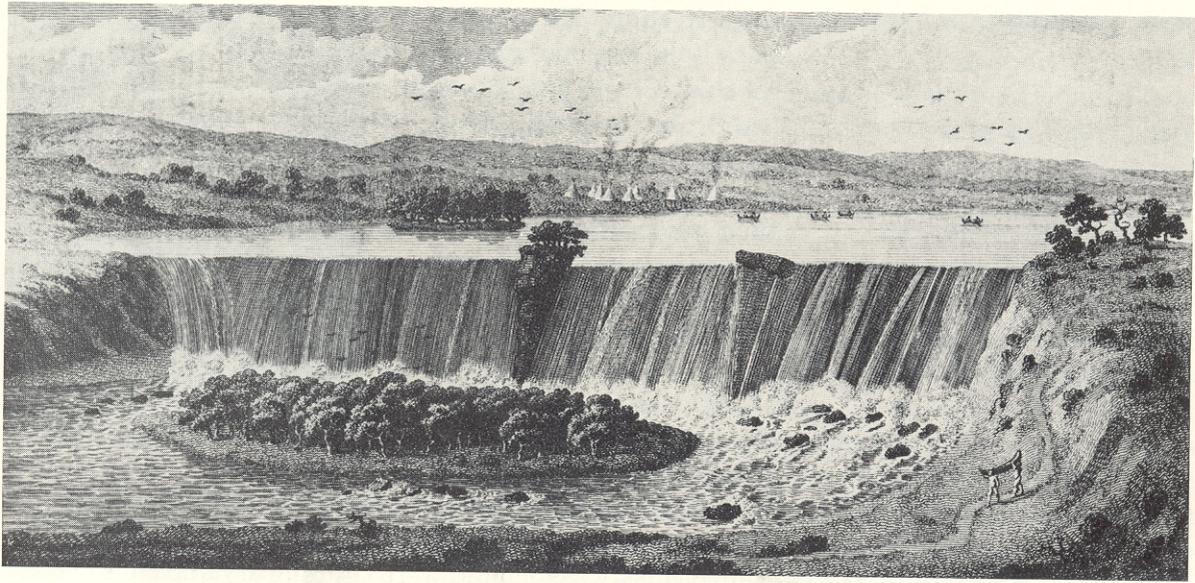
of the St. Paul-Minneapolis metropolitan region to the present time.

The French maintained their dominant position in the area because they knew the land and the waterways. Men like Champlain, Pierre Charles Le Sueur, Jean Nicolet, Robert Rene de la Salle, Father Louis Hennepin, Jacques Marquette, Louis Joliet, Daniel Greysolon Sieur Du Luth, Medard Chouart Sieur Des Groseilliers, and many others explored, mapped and wrote about the inland empire of New France.

Le Sueur, for example, traveled on Lake Superior and built a post on Madeline Island, now in Wisconsin, in 1693. He established a post at Prairie Island on the St. Croix in 1695, and went back to France, but returned by way of the Gulf of Mexico and the Mississippi to build Fort L'Huillier in present Minnesota.⁹ LaSalle left Quebec in 1678 and traveled through lakes Ontario, Erie, Huron and Michigan to Green Bay. He built a fort on the Illinois and then journeyed down the Mississippi while three of his party traveled up the river. In the latter group was Father

The French made use of the variegated network of inland waterways to establish a metropolitan system.





Sketch of the Falls of St. Anthony by Jonathan Carver in 1766.

Louis Hennepin who named the Falls of St. Anthony. As early as 1654 Des Groseilliers traveled in what is now Wisconsin. Five years later he returned to the Lake Superior region with his brother-in-law, Pierre Radisson. Their knowledge of the region was crucial in persuading the British in 1670 to organize the Hudson's Bay Company and challenge the French by entering the fur trade empire from the north.¹⁰

The French traveled to the interior to meet the Indians by such rivers as the St. Lawrence, the Ottawa, Ohio, Mississippi, Wisconsin and Illinois, but going from one river system to another was often difficult. Thus a knowledge of portages was also essential. Thousands of these small land links connected the rivers of the hinterland of New France. In the Minnesota-Wisconsin area dominant transition points in the water highway system were portages between the Fox and Wisconsin rivers, the Grand Portage between Lake Superior and Rainy River, the Browns Valley Portage connecting headwaters of the Red River and the Minnesota, the portages which linked Lake Superior and the Mississippi River by way of the St. Louis River, and the portage between the Brule and St. Croix Rivers which provided an alternative link connecting Lake Superior with the Mississippi.

Daniel Greysolon Sieur Du Luth made use of many of these portages in his journeys. Du Luth, who left Montreal in 1678, wintered at Sault Ste. Marie, then crossed Lake Superior and held council with the Chippewa on the

western shore. He traveled by rivers and portages to Mille Lacs Lake for meetings with the Sioux and wintered in the north at Grand Portage. The next summer (1680) he used the Brule-St. Croix portage to reach the Mississippi where he met Father Hennepin and his two companions. Du Luth persuaded the Sioux to release the captive Frenchman, then guided Hennepin's party back to Montreal using the Fox-Wisconsin portage to Green Bay. Du Luth returned to the interior in 1683 to establish trading posts and forts on these portages.¹¹

Du Luth, LaSalle and Champlain were all trained in the French military tradition. Likewise, after 1667, all but one of the governors general of New France were military men. The French colonial system used organizational and administrative structures associated with the military.¹² Yet so closely associated were the military and commercial interests that it is often difficult to distinguish between French fur trade "forts" and the military "posts" established by the French. Military expeditions, officially sent out to gather information, often took missionaries along, and had more goods for trading and treaty making than arms for battle. The primary objective of the French military force, like that of the United States Army Corps of Engineers two centuries later, was to keep open the transportation and communications systems of the interior.

British Occupation 1763-1815

A long period of debilitating warfare in Europe and North America brought an end to French control of the inland empire. A series of confrontations between the French and British, known in North America as the French and Indian War, led to the sack of Quebec in 1759, the surrender of Montreal in 1760 and the Treaty of Paris in 1763, which gave Great Britain control of New France east of the Mississippi River.

The fur trade continued to be the major economic enterprise of the region. During the period of British occupation the names of forts and posts were changed, but trade along the same waterways continued almost uninterrupted. British merchants supplied, for the trade, merchandise of higher quality at more reasonable prices and British expertise in finance and marketing, but they took over the French metropolitan system, centered on the St. Lawrence. Furs were sent to London instead of Paris.



Portrait of Captain Jonathan Carver published in 1780. Carver was one of the first Americans to be sent into the upper Mississippi Valley to report on its potential for development.

Canoes traveled farther to the north and west, but they were still manned by French-Canadians, who were invaluable to the trade because of their knowledge of land and waterways and their understanding of Indian language and culture.¹³

Almost as soon as they gained control of the region the British masters took steps to protect it. Under terms of the Royal Proclamation of 1763 and the Quebec Act of 1764, the region was made part of the crown colony of Quebec and declared an Indian reserve where settlement and the purchase of land from the Indians was forbidden. While these actions protected the fur trade and the Indians who were a necessary part of it, they infuriated the American colonists who had fought with British regulars in the war and were now eager to move into the Ohio Valley. The American colonists threatened the French metropolitan system, for they came not to trade furs, but to make permanent settlements.

One colonist who saw beyond the fur trade and envisioned a larger destiny for the new British territory was Jonathan Carver. Carver, one of the first British officials to visit the Mississippi Valley, was a Massachusetts-born veteran of the French and Indian War. He reached Mackinac in 1766 and was there commissioned by Major Robert Rogers to head an expedition to the Pacific. Carver traveled from Mackinac to Prairie du Chien by way of the Fox and Wisconsin rivers. In his explorations of the southern and eastern Minnesota area, he visited the Falls of St. Anthony and gave his name to a cave in the bluffs at present-day St. Paul, before his trip farther west was curtailed for lack of supplies. His narrative, *Travels through the Interior Parts of North America in the Years 1766, 1767, and 1768*, which went through more than forty printings, was a popular and informative description of the upper Mississippi Valley.¹⁴

Carver pictured for his English readers the cosmopolitan possibilities at the heart of the North American continent. The new economic empire he envisioned would not be based on the Indian fur trade, but on the development of agriculture and manufacturing. He saw the urban potential of St. Anthony Falls and predicted "that at some future period, mighty kingdoms will emerge from these wildernesses, and stately palaces and solemn temples, with gilded spires reaching the skies, supplant the Indian huts,

whose only decorations are the barbarous trophies of their vanished enemies.”¹⁵ Carver’s vision of an English king “whose head reaches the sun and whose arms encircle the whole earth” conflicted with the American dream of a manifest destiny that would extend its power to the Pacific. However, for some time, the colonists did not have an adequate military organization or the unity of command to challenge this British inland system.

Although the Revolutionary War settled the question of colonial independence, it did not displace British control in the West. Even after the Treaty of Paris (1783) officially consigned the land south of the St. Lawrence River and Great Lakes to the newly formed American confederation, the British continued to command strategic waterways and portages, to expand their trade, and to occupy major fortifications.

Much British activity centered around Grand Portage on the north shore of Lake Superior. It was from this bustling international emporium that Alexander Mackenzie departed in 1789 and 1792 on his exploratory trips to the Arctic and Pacific oceans. Grand Portage was the western base of the North West Company, an aggressive new rival, organized in Montreal to compete with the Hudson’s Bay Company for the fur trade. From Grand Portage David Thompson went out to survey and map much of the northwest for the new company. About 1804, some ten years after Jay’s Treaty had ordered the transfer from British to American control of posts at Oswego, Detroit, Mackinac and Green Bay, the North West Company finally vacated Grand Portage and moved its headquarters over the border to Fort William.

It was during this period of uneasy confrontation between England and the United States that the purchase of Louisiana Territory gave the new nation title to lands west of the Mississippi. President Thomas Jefferson called upon military men with technological and engineering training to explore the area and report on its prospects for settlement.

In the spring of 1804 he sent out Captains Meriwether Lewis and William Clark to explore in the northwest. On an expedition of more than two years they traveled by the Missouri and Columbia rivers to the Pacific coast.



Sketch of Lieutenant Zebulon Montgomery Pike, the army officer responsible for acquiring land for the first fort in the upper Mississippi Valley.

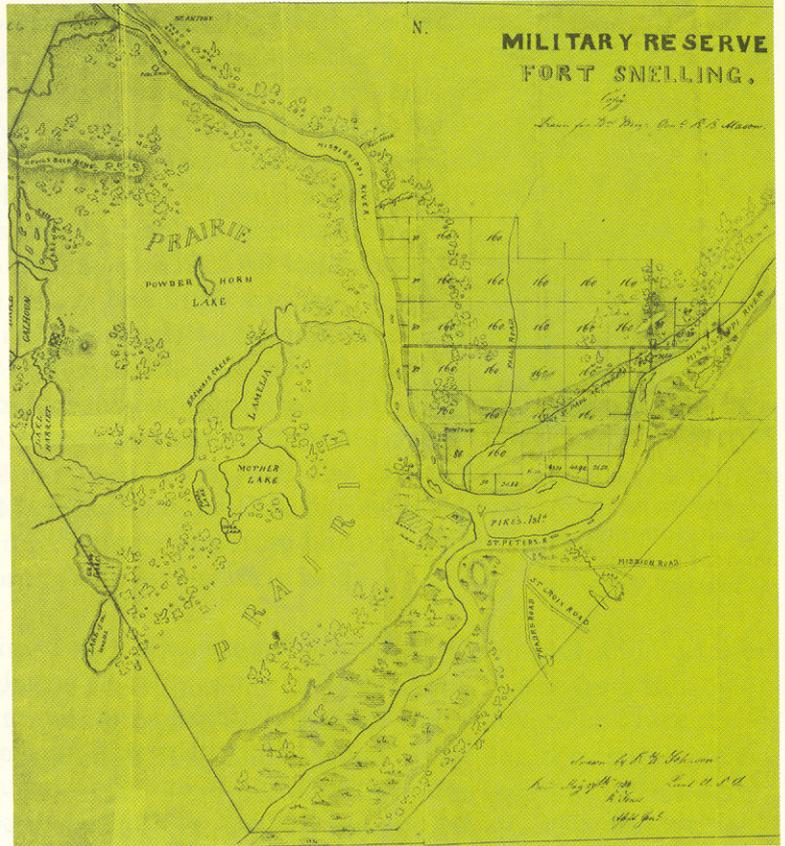
A year after Lewis and Clark started up the Missouri, Lieutenant Zebulon Montgomery Pike became the first representative of the United States Army to be sent into the upper Mississippi Valley.¹⁶ Pike, who had served for over ten years as a post commander at American forts on the Ohio, Kaskaskia and Wabash rivers, was called to St. Louis in 1805 by General James Wilkinson. The general, who held the position of commander-in-chief of the western army and governor of Louisiana Territory, gave Pike orders (later approved by the President) to prepare for an expedition to the headwaters of the Mississippi River. Equipped with an inaccurate watch, a thermometer and a simple instrument for determining latitude, Pike left St. Louis, accompanied by a sergeant, two corporals and seventeen privates. Many other scientifically trained and more respectably equipped military men would follow him in later expeditions to the region.

Lieutenant Pike's mission was to proceed up the Mississippi with all possible dispatch, taking note of the "population and residence of the several Indian nations, of the quantity and species of skins and furs they barter per annum, and their relative price of goods, of the tracts of country on which they generally make their haunts, and the people with whom they trade." The government wanted a report on "rivers, creeks, highlands, prairies, islands, rapids, shoals, mines, quarries, timber, water, soil, Indian villages and settlements" and to provide meteorological observations on the wind and weather.¹⁷

Pike was to discover and map the source of the Mississippi, and he was also instructed to choose sites for three military posts. One was to be located between St. Louis and Prairie du Chien, another at the mouth of the "Ouisconsin" (Wisconsin River) and a third at the mouth of the "St. Pierre" (Minnesota River). Wilkinson's orders told Pike to make a formal purchase of these sites at conferences with the Indians.

Twenty-six-year-old Lieutenant Pike was thus to act as explorer, astronomer, surveyor, clerk, spy, guide, hunter, Indian agent, commander of troops, botanist and land agent—the prototype of a Corps engineer a century later! Pike reached Leech Lake in the depth of winter and supposed it to be the source of the Mississippi. When he found the British flag flying over the fur trade post of Hugh McGillis, Pike had his men shoot it down. The most

This map was drawn in 1850 by Lieutenant R. W. Johnson, picturing the land acquired by Lieutenant Zebulon Pike. It was here that the first permanent settlement was built by American soldiers.



significant outcome of his 5,000-mile expedition was the acquisition by treaty with the Sioux of two tracts of land for military reservations, one at the mouth of the Minnesota River and the other at the confluence of the St. Croix and Mississippi rivers. This treaty, ratified by the United States Senate in 1808, authorized the purchase of the area which would later become the site of Fort Snelling and the urban center for the upper Mississippi River region. The bargain price for a total of approximately 100,000 acres was about twenty cents an acre, though Pike estimated that the actual value at the time was closer to ten times that amount.

Lieutenant Pike's exploratory journey did not bring American control to the upper Mississippi Valley. The effective regulation of commerce and Indian relations remained in the hands of men like the British fur trader Robert Dickson.¹⁸ Dickson's trading interests centered around the Falls of St. Anthony, though his company and agents stretched from the Missouri River to Lake Michigan. He befriended Pike and acquired an American trading license in St. Louis, but his allegiance was to

Britain and at the beginning of the War of 1812 his knowledge of Indian dialects and culture enabled him to organize the Sioux around the British cause. Dickson led a band of Sioux to Fort Mackinac and caused the Americans there to surrender without firing a single shot. Throughout the war, Dickson and his Indian allies controlled the upper Mississippi and its major tributaries. In fact, Fort Shelby, later called Fort McKay, the fortification at the mouth of the Wisconsin River at Prairie du Chien, was held by Dickson's forces as late as May, 1815.

It was clear that although Great Britain had given political freedom to the thirteen colonies, British leaders were not ready to relinquish commercial control of the North American continent. The War of 1812 was fought, in part, over this issue. When in 1809 the Shawnee leader Tecumseh and his brother the Prophet formed a great confederacy of Indian tribes east of the Mississippi to thwart colonial occupation, most Americans blamed the British to the north for arming and organizing this barrier to expanding settlement. The first battle of the war at Tippecanoe (1811) was between this Indian confederacy and Ohio Valley recruits under the command of General William H. Harrison. Harrison's victory inspired Americans to think of attacking Montreal. Many settlers who had never heard of the Orders in Council nor of the impressment of American seamen understood that British control of western waterways centered at Montreal. Attacking the strategic waterway at another point, American forces under General William Hull succeeded in capturing Detroit but were unable to extend their control down the St. Lawrence.

By the end of the first year of the war the British had occupied the forts at Mackinac, Chicago, Green Bay and Prairie du Chien, dominating the whole region west of Lake Michigan. Americans won other battles on the Great Lakes with Captain Oliver H. Perry's small fleet and turned back British attacks at Niagara, Lake Champlain and New Orleans, but they were not able to dislodge the British from the upper Mississippi Valley.

The United States was humiliated in the war, especially by the burning of the Capitol, but in the end, Americans won the peace. The terms of the Treaty of Ghent (1814) affirmed American sovereignty in the territory which now comprises Minnesota and Wisconsin and

opened the way for military occupation and settlement, but the exact boundary between the British and American territories was not very clear. To the west of Lake of the Woods, the boundary followed the forty-ninth parallel. To the east, Great Britain and the United States were to share control of the Great Lakes and St. Lawrence. The boundary between Lake Superior and Lake of the Woods was only determined after protracted negotiations, reconnaissances and many boundary commission meetings extending over a period of more than one hundred years. Well before that time, however, it was clear that the headwaters of both the Mississippi and the Red River of the North were within the United States.¹⁹

Conflicting interests in a part of this boundary area in what is now Manitoba led to bitter strife. In 1811 the Scottish Earl of Selkirk had obtained a huge grant of land from the Hudson's Bay Company to found an agricultural colony along the Assiniboine and Red rivers. The North West Company, viewing the colony as a menace to the metropolitan system of trade, organized bands of French-Indian mixed-bloods (Métis) and invaded the colony. The greatest tragedy in the ensuing guerilla war was the Massacre of Seven Oaks in 1816 when the governor of the colony and a party of his men were killed. The year after the death of the colony's founder, Lord Selkirk, the North West Company was taken over by its rival the Hudson's Bay Company. Although much of the land of the Selkirk Colony remained British after the international boundary was set at the forty-ninth parallel, many of its inhabitants came to regard Fort Snelling, and later St. Paul and Minneapolis as the urban center for their cultural and commercial activities.²⁰

American objectives in this headwaters region were loosely organized around the expectation that it was America's destiny to expand into unsettled territory. Settlement along western rivers and lakes was intermittent, but lacking a strong, unified and consistent policy of occupation, there was at this time no assured continuity of development nor interregional co-operation. An abortive attempt was made by the government before the War of 1812, to establish a chain of fortifications along the edge of western settlement to check British encroachment. At the same time these forts were to watch over American commerce, provide refuge for settlers and protect government agents assigned to deal with the Indians.²¹



Sketch of Major Stephen H. Long, an officer of the Corps of Topographical Engineers, who made two trips into the upper Mississippi Valley in 1817 and 1823 to map and describe the area.

Lieutenant Pike's recommendation for two forts on the upper Mississippi, like many other ideas and plans, was shelved during the war.

American Exploration and Settlement 1817-1866

In 1817 the mission of Brevet Major Stephen H. Long was a part of the government's attempt to assume a more active role in the upper Mississippi region. Long, a graduate of Dartmouth College, a former school teacher and assistant professor of mathematics at West Point, had been commissioned a topographical engineer in 1816 and assigned to the ninth military department at Belle Fontaine. His orders, in May, 1817, were to prepare charts of the Mississippi as far as Prairie du Chien and of the Fox and Wisconsin waterway, to examine forts then being built on the Mississippi and to gather information on the country and the Indians in the area. In addition to these specified duties, Long extended his journey beyond Prairie du Chien (Fort Crawford) to the Falls of St. Anthony and to the site proposed by Pike for a military post at the mouth of the Minnesota River.²²

Long endorsed the upper Mississippi site for a post both because of its commanding location and because it was on an important line of communication between white men and Indians. Two years later men of the Fifth Infantry, under the command of Lieutenant Colonel Henry Leavenworth, followed Long to the site. They spent the winter



Henry Lewis' early painting of Fort Crawford at Prairie du Chien, where the Wisconsin River joins the Mississippi.



Painting by J. C. Wilds of Fort Snelling in 1844.

in a temporary cantonment on the south side of the Minnesota, but the next year relocated their headquarters on the high bluff overlooking the two rivers where they built Fort St. Anthony. The upper Mississippi military post was renamed Fort Snelling in 1824 by order of General Winfield Scott, in honor of Colonel Josiah Snelling, post and regimental commanding officer under whom the stone citadel was completed. By 1828 five forts were established to regulate transportation and communication in the upper Mississippi Valley. They were Fort Snelling, Fort Howard at Green Bay, Fort Winnebago at the Fox-Wisconsin River portage, Fort Crawford at the mouth of the Wisconsin (Prairie du Chien) and Fort Armstrong (Davenport) at the mouth of the Rock River.

In 1823 Major Long returned to the Minnesota country on a military mission to explore the Minnesota River, the Red River of the North and the boundary region between the United States and British America. By that time the area around the fort had gone through the initial process of Americanization and a few squatters had settled in the area that is now a part of the metropolitan Twin Cities.²³



Portrait of Colonel Josiah Snelling by an unknown artist (about 1818). Snelling was the commander in charge of construction of the fort named in his honor and was the first to utilize the power of the Falls of St. Anthony for milling purposes.

As early as 1802 the federal government began to provide for the special education of engineers such as Major Long. While the United States was establishing its authority over its western lands it began to train military personnel to explore, map, build forts and provide many kinds of support to settlers. Congress authorized the Corps of Engineers in 1802 to organize a military academy at West Point, New York, where students would be offered a thorough engineering education. In 1813 Congress created a separate topographical corps of eight engineer officers. It was disbanded after the War of 1812, re-established in 1816 and in 1818 was placed under the supervision of the Chief Engineer whose headquarters was established in Washington, D.C. Under the Office of the Chief of Engineers the topographical engineers were instructed to complete the exploration of the west.²⁴ These engineers, comprising some of the elite of the military academy graduates, became in the next decade the federal government's task force for exploration.

In 1831 the topographical engineers were organized into an independent Topographical Bureau under the secretary of war. In 1838 the bureau became a corps and to this Topographical Corps were transferred most federal civil works. By 1841 surveys of northern and northwestern lakes, explorations in the west and the demarcation of state and international boundaries were all a part of the corps work load. Civilian engineers also worked for the Topographical Corps. As a result, in the 1840s and 1850s Joseph Nicollet prepared excellent maps of the upper Mississippi region, and Charles Ellet developed a comprehensive plan of improvement for the Ohio and Mississippi watersheds.²⁵ During the Civil War the separate Topographical Corps was abolished and its personnel and functions once again placed under the supervision of the Office of the Chief of Engineers.²⁶

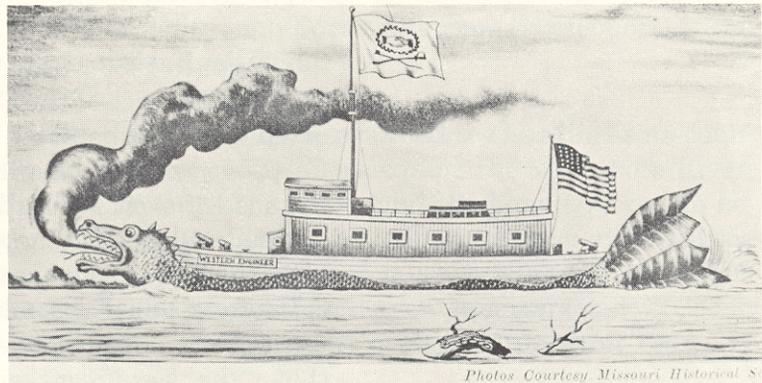
Prior to 1866 within the area which now comprises the St. Paul District of the Corps of Engineers, a combination of civilian and military engineers of the Topographical Corps served the American inland empire in many ways. Because of their scientific and technological training it is not surprising that they played an important role in the urbanization of the area. Francis Paul Prucha, who has carefully studied the role of the military in the development of the Northwest between 1815 and 1860, has written that "the significant contribution that United States

troops made to the development of the frontier was possible only because they constituted, above everything else, directed manpower. They were a labor force unequalled in compactness and unity of purpose by any group of frontiersmen.²⁷ Prucha explains that the role of the United States army was less important in military combat than it was in the urbanization of the region. The army surveyed rivers and lakes, made maps, improved navigation, built dams, roads and bridges, provided a regular mail service, negotiated with the Indians for land, established centers for the distribution of goods, offered medical service, protected government agencies, regulated hunters and trappers, assisted law officers, established legal claims, constructed fortifications, gave concerts, promoted education and religion, established the first libraries in the region, built grain and lumber mills and occasionally engaged in limited battle with the Indians. Federal appropriations of money to the army subsidized the urbanization of the upper Mississippi Valley.

Early Urbanization 1823-1866

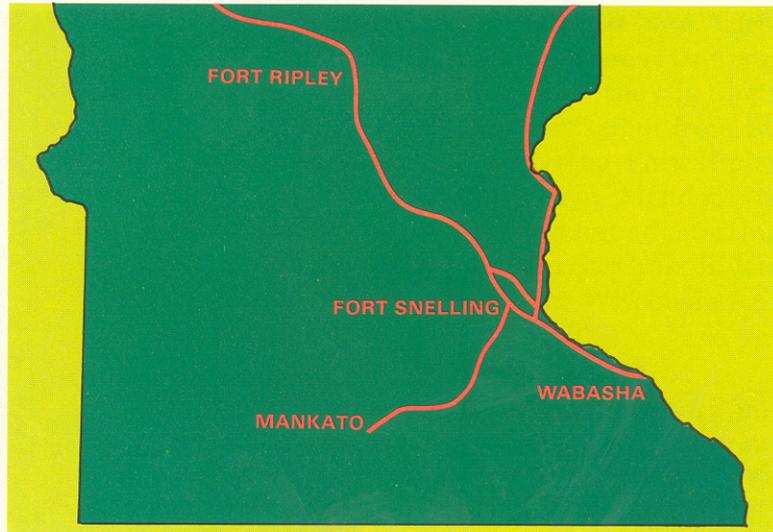
The first steamboat to ascend the Mississippi River to the site of Fort Snelling, the "Virginia," arrived at the fort in 1823 shortly before Major Long came on his second trip.²⁸ The steam engine would change the whole nature of the western frontier. The year 1776, a year of technological as well as political significance, marked the beginning of the manufacture of steam engines in Birmingham, England. Within two generations James Watt's invention transformed the North American continent. Robert Fulton used a Watt engine in 1807 to propel a steamboat on the Hudson, as did John Stevens. Among others who followed Stevens' and Fulton's lead was Major Stephen Long who built the "Western Engineer" for his 1819 Yellowstone

This cartoon sketch of Major Stephen Long's "Western Engineer" depicts the first piece of equipment in the floating plant of the Corps of Engineers on inland waters. Long obtained permission to design and build the steamboat in 1818 for aiding exploration of the West.



Photos Courtesy Missouri Historical Society

The early military roads and forts formed the first urban centers in the upper Mississippi River watershed.



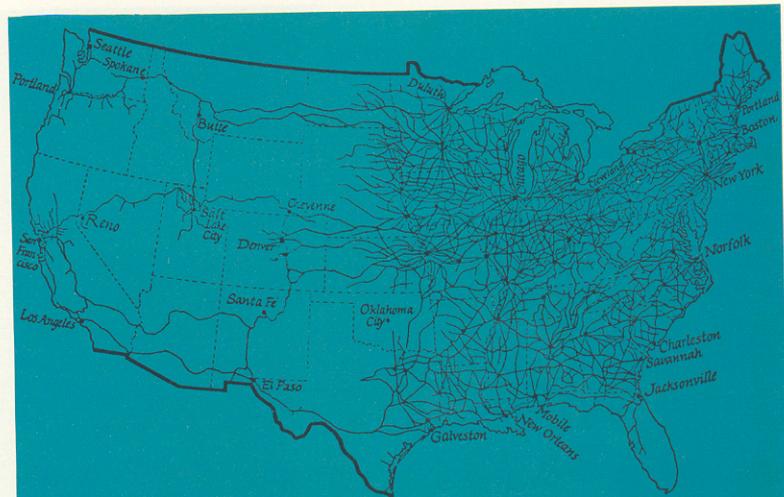
Expedition up the Missouri River.²⁹ Launched in Pittsburgh, the seventy-five- by thirteen-foot stern-wheeler was another example of government encouragement for new technological innovations.

The federal government gave strong support to the development of steamboat traffic on western rivers in the following decades by contracting with steamboat owners for the movement of troops, mail and military supplies to posts on the Mississippi and its tributaries. For example, when Fort Gaines, later named Fort Ripley, was built near present-day Little Falls, Minnesota, in 1849, the steamer "Governor Ramsey" was put into service above the Falls of St. Anthony to supply this outpost. Likewise, the "West Newton" provided service on the Minnesota River after 1853, to Fort Ridgely.³⁰

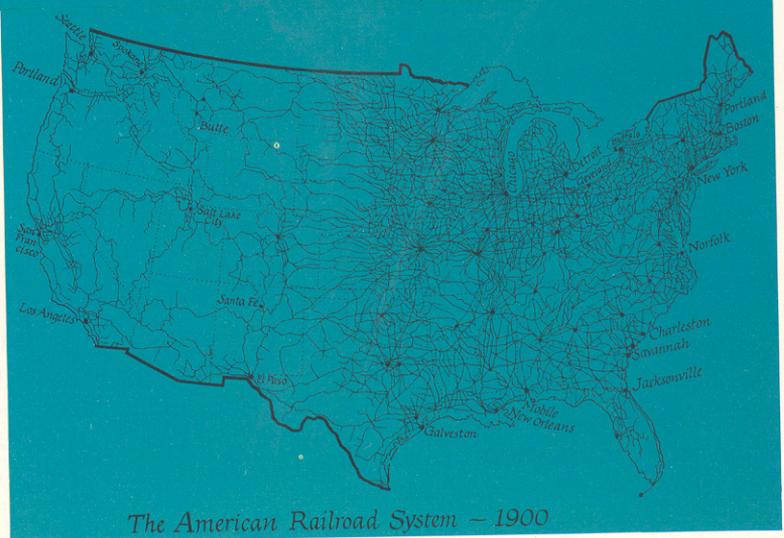
Regular steamboat service to St. Paul began in 1847 and activity at that port increased annually. One hundred steamboats docked at St. Paul in 1855 and three years later the traffic boom there totaled more than 1,000 arrivals. The year 1847 was a turning point in Minnesota history in another sense. In that year the city of St. Paul was surveyed and platted and its superior location below the falls soon made it the center of Mississippi River commercial activity. By 1866 the steam engine had become a central factor, on both land and water, in the whole urbanization process, running machines in factories, milling grain, cutting lumber, transporting goods and people and functioning as a major power source for public utilities in urban centers.³¹

By 1870 railroad development had barely reached the Mississippi River.

By the turn of the century the whole nation was tied together by the rail network. Many of these railroad lines followed the nation's waterways because the grade was more uniform along the river valleys. Thirty years seems a very short period for the thousands of miles of rails, ties, crossings, bridges, depots, and other components of this complex matrix to be constructed.



The American Railroad System - 1890



The American Railroad System - 1900

The military arm of the government aided land transportation as well. In the 1830s the first road-building efforts of army engineers created an overland path along the Fox-Wisconsin waterway, linking Fort Howard at Green Bay with Fort Winnebago and Fort Crawford.³² From 1842 to 1845 soldiers constructed a road through Wisconsin from Green Bay to Fort Snelling. Overland routes were necessary transportation and communication links in a climate that made rivers unusable for five months of the year. Most of these roads, like the later railroads, used the grades and contours of river valleys. Thus their routes paralleled a part of the earlier transportation networks of the region.

During the 1847-57 period, the Topographical Corps under the direction of Lieutenant James H. Simpson

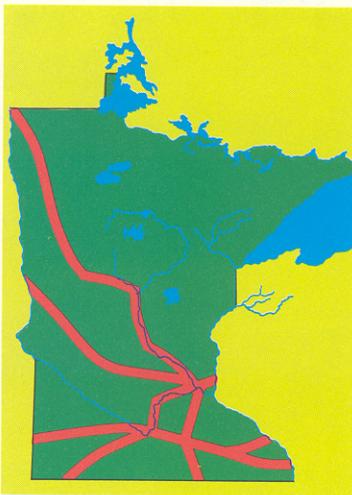


As a member of the United States Corps of Topographical Engineers, Lieutenant James Simpson was in charge of surveying and road-building in Minnesota during the 1850s.

surveyed and built four military roads in Minnesota. Three of these roads terminated in the St. Paul area. One was built southwest from Mendota to Mankato (the Big Sioux River Road), a second followed the Mississippi from St. Paul to Fort Ripley and Long Prairie (the Fort Ripley Road) and a third went southeast from Mendota to Wabasha (the Wabasha Road). The fourth road, starting at the conjunction of the Mississippi and St. Croix Rivers (Point Douglas), went north to Superior, Wisconsin (the St. Louis River Road).³³

Between 1849 when Minnesota became a territory and 1858 when it reached statehood, its population grew from less than 5,000 to over 150,000, a thirty-fold increase. The railroads were one factor involved in this growth. By 1854 the railroads had arrived at Rock Island, in 1857 a line reached Prairie du Chien, and a year later at La Crosse, the Mississippi was connected by rail with Lake Michigan and the eastern cities.

Between 1853 and 1857 no less than twenty-seven charters were granted to make St. Paul, Minnesota's capital city, the terminus of a paper railway network in the Upper Midwest.³⁴ After a heated debate in Congress over possible trans-continental routes, the Pacific Railroad Survey Bill was passed in 1853, requiring the Topographical Corps to report within ten months on all practical railroad routes across the trans-Mississippi West to the Pacific Ocean. First in the field was the Isaac I. Stevens' expedition to survey a northern route beginning at St. Paul. Stevens, the new governor of Washington Territory, was a former lieutenant in the Corps of Engineers. His party included two civilian engineers, a professional artist, a geologist, a surgeon-naturalist and two noted scientists, Dr. George Gibbs and Dr. Thomas Cooper. The Topographical Corps representative was Captain George B. McClellan, who was responsible for surveys in the Cascade Mountain part of the region. Stevens' report indicated that the northern route provided great potential for commerce because this region had vast resources of land for agricultural development, timber, water and minerals.³⁵ Eventually, the Northern Pacific and other transcontinental routes were built through this territory with dual terminals in St. Paul and Duluth and James J. Hill, the "Empire Builder," proved that the region had resources to support a railroad system without federal subsidies for its construction.³⁶



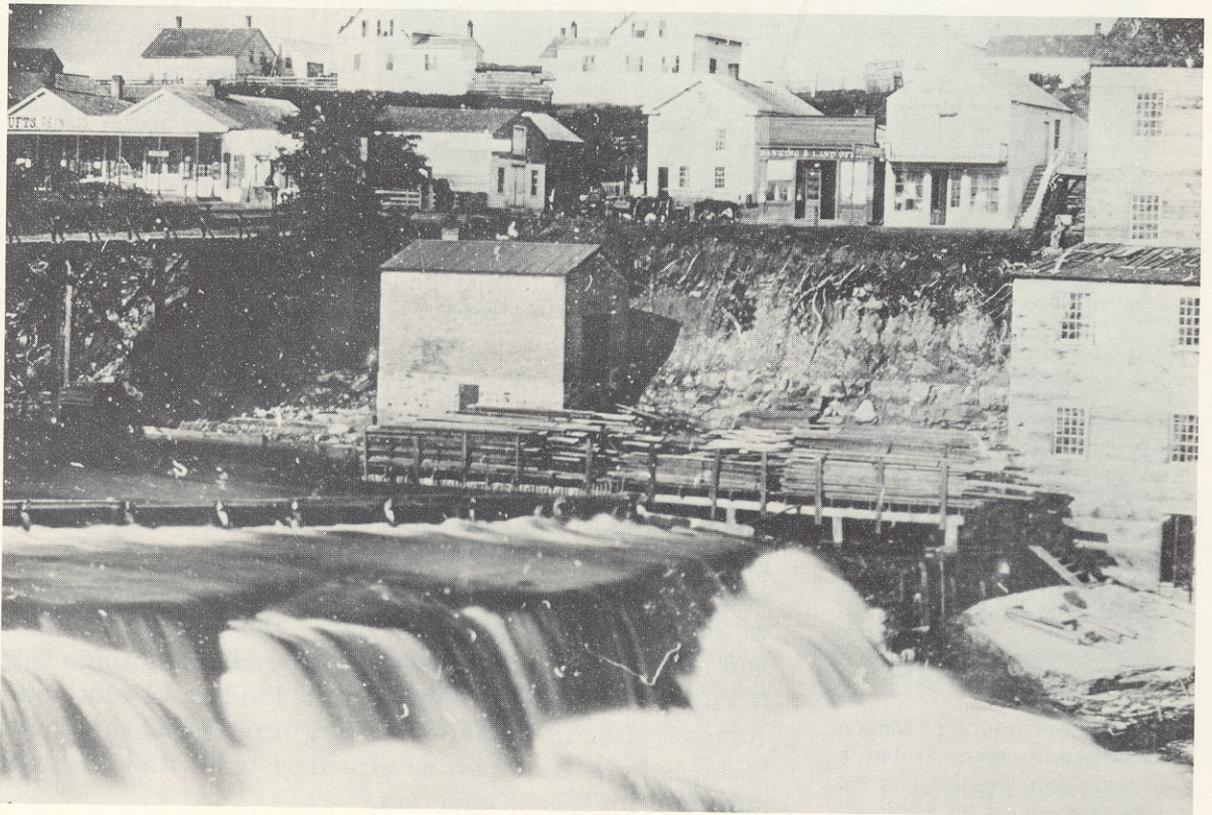
The industrial future of Minnesota is clearly demonstrated in this map showing the railroad grants planned for the state.



Sketch of Franklin Steele, who purchased land on the east bank of the Falls of St. Anthony and was the first to develop privately owned milling establishments on the upper Mississippi.

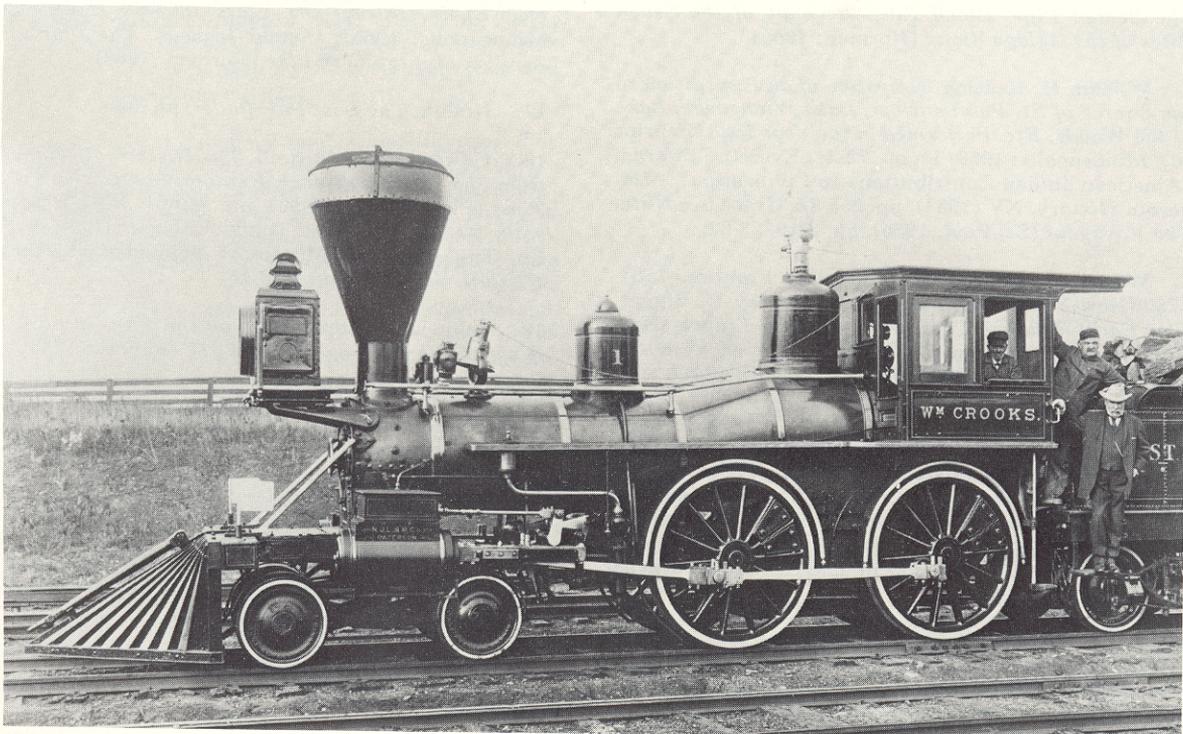
Between 1847, when Franklin Steele began his milling developments, and 1869 when the above photo was taken, the village of St. Anthony on the east side of the cataract thrived as an industrial center.

In 1847, too, at the Falls of St. Anthony, Franklin Steele, a former storekeeper at the fort, began the construction of a dam, the first sign of the industrial activity which would eventually develop Minneapolis into an important manufacturing center.³⁷ Steele's venture, however, came some twenty years after the earliest steps toward industrial development had been taken at the falls by the army. In the early days, as Lucile M. Kane pointed out in her history of the waterfall, "only military men who built the fort saw a functional use for the falling waters."³⁸ For more than twenty years the ownership of the falls by the government and the Sioux prevented private exploitation of the water power. Thus from 1820 when the army constructed a gristmill and a sawmill capable of sawing 3,500 feet of pine in a day, until 1847 when Steele began cutting timber, the power of the Falls of St. Anthony was utilized only by the United States Army. The story of Franklin Steele's business is a complicated and intriguing one which reaches a climax with his purchase of the Fort Snelling Military Reservation. Steele thought he could afford it, for by 1857 his four lumber mills were sawing 100,000 board feet per day and over twelve million feet per year.³⁹



By the end of the Civil War a renewed interest in the economic development of the upper Midwest excited the imagination of citizens in the growing Twin City area. St. Paul, whose immediate past had relied upon its location as the northern navigational terminus of the Mississippi, was already developing into an important railroad center. Minneapolis, on the other hand, boasted of the greatest source of water power in the headwaters region. The upper Mississippi above the Falls of St. Anthony promised to provide billions of feet of timber, and the western plains of Minnesota, the Dakotas and Montana were prime sources of wheat to be ground into cereal products. Though the passing of the fur trade meant that the canoe had been displaced by steam engines, and the tall tales of the lumberjacks replaced the songs of the voyageurs, the end had not come for the utilization of the waterways in the headwaters of the North American continent. A new industrial-urban system, first centered in the Twin Cities and later around the Duluth-Superior harbor would continue to exploit the natural resources of the Great Lakes, the Mississippi and Red Rivers and their tributaries. To assist this urban-industrial growth the United States Army Corps of Engineers opened a permanent office in St. Paul in 1866 and assigned Major Gouverneur K. Warren to serve as its engineer in charge.

James J. Hill is pictured stepping down from the wood-burning "William Crooks." Hill was the first coal dealer in St. Paul, and by the time this photograph was taken around 1907 he had become the "Empire Builder" of the Northwest through his promotion of railroads and town development.



Notes

1. George M. Schwartz and George A. Thiel, *Minnesota's Rocks and Waters: A Geological Story* (Minneapolis: 1974), p. 5; Edmund C. Bray, *A Million Years in Minnesota: The Glacial Story of the State* (St. Paul: 1962); Frederick B. Loomis, *Physiography of the United States* (New York: 1937); Chessley J. Posey, "The Influence of Geographic Factors in the Development of Minnesota," *Minnesota History*, II (1918), pp. 443-53.
2. Mildred L. Hartsough, *The Development of the Twin Cities (Minneapolis and St. Paul) As a Metropolitan Market* (Minneapolis: 1925); Isaac Atwater (ed.), *History of Minneapolis Minnesota*, I, II (New York: 1893); Barbara Flanagan, *Minneapolis* (New York: 1973); Ronald Abler, John S. Adams, and John R. Borchert, *The Twin Cities of St. Paul and Minneapolis* (Minneapolis: 1976); Charles B. Kuhlmann, "The Influence of the Minneapolis Flour Mills Upon the Economic Development of Minnesota and the Northwest," *Minnesota History*, VI (1925), pp. 141-54.
3. George E. Hyde, *Indians of the Woodlands from Prehistoric Times to 1725* (Norman, Okla.: 1962); Edwin T. Denig, *Indian Tribes of the Upper Missouri* (Norman: 1961); Dennis Tedlock (ed.), *Teachings from the American Earth* (New York: 1975); E. J. Brown (ed.), *The Sacred Pipe: Black Elk's Account of the Seven Rites of the Oglala Sioux* (Norman: 1953).
4. William H. Keating, *Narrative of an Expedition to the Source of St. Peter's River, Lake Winnepeek, Lake of the Woods, Etc. Performed in the Year 1823* (Reprint ed.; Minneapolis: 1959) II, pp. 72-74; Everett Edwards, "American Indian Contributions to Civilization," *Minnesota History*, XV (1934), pp. 255-72; Grace Lee Nute, *The Voyageur* (St. Paul: 1955), pp. 3-19, 23-32.
5. William J. Eccles, *The Canadian Frontier, 1534-1760* (New York: 1969), pp. 103-86; Henry D. Bigger, *The Early Trading Companies of New France* (New York: 1965); Norman Caldwell, *The French in the Mississippi Valley, 1740-1750* (Urbana, Ill.: 1941).
6. Eccles, *The Canadian Frontier*, p. 7; J. M. S. Careless, "Frontierism, Metropolitanism and Canadian History," *Canadian Historical Review*, XXXV (1954), pp. 1-21; Grace Lee Nute, "Posts in the Minnesota Fur-Trading Area," *Minnesota History*, XII (1931), pp. 358-85. The unique "frontier" of Canada is also discussed by W. L. Morton in *The Canadian Identity* (Madison: 1961), p. 5.
7. J. H. Schlarman, *From Quebec to New Orleans* (Belleville: 1929), pp. 29-52, 160-67; Alfred L. Burt, *The Old Province of Quebec* (Minneapolis: 1933), pp. 1-12; James Douglas, *Old France in the New World* (Cleveland: 1905), pp. 505-08.
8. Eccles, *The Canadian Frontier*, p. 101. The population of New France, according to Eccles, was 3,000 in 1665 and 15,000 in 1700.
9. Theodore C. Blegen, *Minnesota: A History of the State* (Minneapolis: 1963), pp. 52-53.
10. Harold A. Innis, *The Fur Trade in Canada* (New Haven: 1962), pp. 119-65; Grace L. Nute, *Caesars of the Wilderness: Médard Chouart, Sieur des Groseilliers and Pierre Esprit Radisson, 1618-1710* (New York: 1943).
11. David Abodaher, *Daniel DuLuth, Explorer of the Northlands* (Riverside, Calif.: 1966), pp. 48-122.
12. Innis, *The Fur Trade in Canada*, p. 113.
13. Innis, *The Fur Trade in Canada*, pp. 116-80; Edgar McInnis, *Canada: A Political and Social History* (New York: 1963), pp. 131-35; Wayne E. Stevens, "The Fur Trade in Minnesota During the British Regime," *Minnesota History*, V (1923), p. 23.
14. Jonathan Carver, *Travels Through the Interior Parts of North America in the Years 1766, 1767, and 1768* (Reprint ed.; Minneapolis: 1956).
15. Blegen, *Minnesota*, p. 69; Jonathan Carver, *Three Years Travel Through the Interior Parts of North America* (Philadelphia: 1789), p. iv.
16. John Upton Terrell, *Zebulon Pike: The Life and Times of an Adventurer* (New York: 1969); W. Eugene Hollon, *The Lost Pathfinder: Zebulon Montgomery Pike* (Norman: 1949); Elliot Coues, *The Expeditions of Zebulon Montgomery Pike, To Headwaters of the Mississippi River, Through Louisiana Territory, and in New Spain, During the Years 1805-6-7* (Reprint ed.; Minneapolis: 1965); Donald Jackson, *The Journals of Zebulon Montgomery Pike* (Norman: 1966).
17. Hollon, *The Lost Pathfinder*, pp. 56-57.
18. Edward Duffield Neill, *The History of Minnesota from the Earliest French Explorations to the Present Time* (Philadelphia: 1858), pp. 250-91; Blegen, *Minnesota*, p. 91; Louis A. Tohill, "Robert Dickson, The Fur Trade, and the Minnesota Boundary," *Minnesota History*, VI (1925), pp. 330-42.
19. John E. Parsons, *West on the 49th Parallel, Red River to the Rockies, 1872-1876* (New York: 1963).
20. Keating, *Narrative of an Expedition*, II, pp. 60-72; Blegen, *Minnesota*, p. 154; Clarence W. Rife, "Norman W. Kittson, A Fur-Trader at Pembina," *Minnesota History*, VI (1925), pp. 225-52; Grace Lee Nute, "New Light on Red River History," *Minnesota History*, V (1924), pp. 561-72; John J. Pritchett, "Some Red River Fur-Trade Activities," *Minnesota History*, V (1924), pp. 401-23; Willoughby Babcock, "With Ramsey to Pembina: A Treaty-Making Trip in 1851," *Minnesota History*, XXXVIII (1962), pp. 1-10.
21. Blegen, *Minnesota*, pp. 86, 88, 91, 96.

22. William H. Goetzmann, *Army Exploration in the American West 1803-1863* (New Haven: 1959), pp. 8, 40; Richard G. Wood, *Stephen Harriman Long, 1784-1864, Army Engineer, Explorer, Inventor* (Glendale: 1966), pp. 46-47; Theodore Christianson, "The Long and Beltrami Exploration in Minnesota One Hundred Years Ago," *Minnesota History*, V (1923), pp. 249-64; Lucile M. Kane, June D. Holmquist, and Carolyn Gilman, *The Northern Expeditions of Stephen H. Long, The Journals of 1817 and 1823 and Related Documents* (St. Paul: 1978), pp. 152-90.
23. Evan Jones, *Citadel in the Wilderness: The Story of Fort Snelling and the Old Northwest Frontier* (New York: 1966), pp. 67-87; Marcus Lee Hansen, *Old Fort Snelling, 1819-1858* (Minneapolis: 1958), pp. 73-83; Keating, *Narrative of an Expedition*.
24. Henry P. Beers, "A History of the U. S. Topographical Engineers, 1813-1863," *Military Engineer*, XXXIV (June 1942), pp. 287-91, 348-352; Henry L. Abbot, "The Corps of Engineers," *Journal of the Military Service Institution*, Vol. 15 (1894), pp. 414-25; William M. Robinson, "The Corps of Topographical Engineers," *Military Engineer*, XXIII (July-August, 1931), pp. 303-07.
25. See the government reports by Joseph Nicollet, *Report Intended to Illustrate a Map of the Hydrographic Basin of the Upper Mississippi River*, S. Doc. 237, 26th Cong., 2d sess. (1843), Ser. 380, and Charles Ellet, *The Mississippi and Ohio Rivers* (Philadelphia: 1853), Arno Press Reprint, 1970.
26. Henry C. Jewett, "History of the Corps of Engineers to 1915," *Military Engineer*, XXXVIII (September-October, 1922), pp. 340-46; Gilbert A. Youngberg, "The Civil Activities of the Corps of Engineers," *Military Engineer*, XIII (1921), pp. 73-77; W. Stull Holt, *The Office of the Chief of Engineers of the Army; Its Non-Military History, Activities and Organization* (Baltimore: 1923).
27. Francis Paul Prucha, *Broadax and Bayonet: The Role of the U. S. Army in the Development of the Northwest, 1815-1860* (Madison: 1953), p. 34. See also, Francis Paul Prucha, "The Settler and the Army in Frontier Minnesota," *Minnesota History*, XXIX (1948), pp. 231-46; Herman R. Friis, "The Cartographic Image of the Plains Region," in *Images of the Plains: The Role of Human Nature in Settlement* (Lincoln: 1975); Prucha, *American Indian Policy in the Formative Years* (Cambridge: 1962). Prucha, *The Sword of the Republic: The United States Army on the Frontier, 1783-1846* (London: 1969), pp. 169-82.
28. Thomas Hughes, "History of Steamboating on the Minnesota," *Minnesota Historical Collections*, X (1905), pp. 133-37; Mildred L. Hartsough, *From Canoe to Steel Barge on the Upper Mississippi* (Minneapolis: 1934); William J. Peterson, *Steamboating on the Upper Mississippi* (Iowa City: 1968), pp. 90-106.
29. Wood, *Stephen Harriman Long*, pp. 59-89.
30. Prucha, *Broadax and Bayonet*, p. 131.
31. Carroll W. Pursell, *Early Stationary Steam Engines in America: A Study in the Migration of a Technology* (Washington: 1969), pp. 61-89; Louis C. Hunter, "Waterpower in the Century of the Steam Engine," in *America's Wooden Age: Aspects of Its Early Technology* (New York: 1974), pp. 160-92.
32. Prucha, *Broadax and Bayonet*, pp. 134-44; Arthur J. Larsen, "Roads and the Settlement of Minnesota," *Minnesota History*, XXI (1940), pp. 225-44.
33. Grover Singley, *Tracing Minnesota's Old Government Roads* (St. Paul: 1974).
34. Blegen, *Minnesota*, p. 194.
35. *Reports of Explorations and Surveys, to Ascertain the Most Practicable and Economical Route for a Railroad from the Mississippi River to the Pacific Ocean, I*, 33 Congress, 2 session, *Senate Executive Documents*, no. 78.
36. Stewart Hall Holbrook, *James J. Hill, A Great Life in Brief* (New York: 1955); Joseph G. Pyle, "James J. Hill," *Minnesota History Bulletin*, II (1918), pp. 295-323; Albro Martin, *James J. Hill and the Opening of the Northwest* (New York: 1976), pp. 332-98.
37. Lucile M. Kane, *The Waterfall that Built a City* (St. Paul: 1966), pp. 13-29; Rodney Loehr, "Franklin Steele, Frontier Businessman," *Minnesota History*, XXVII (1946), pp. 309-18.
38. Kane, *The Waterfall that Built a City*, p. 9.
39. Kane, *The Waterfall that Built a City*, p. 26.

