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A Thesis

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by

Sam J. Graber

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CHAPTER I

HISTORICAL SKETCH OF RIVER IMPROVEMENTS TO 1900

The question of river improvements has been before the United States intermittently since Washington's first administration. Although there is no definitive history of the subject, it is convenient to divide the topic into two periods, the first from 1784 to 1865, and the second from 1865 to 1900. If the originator of a great system or plan can be called its father, then to George Washington belongs the honor of being Father of River Improvements in the United States.[1] From the time that Washington, as Adjutant-General of State Militia of Virginia, made his journey in 1753 to the Ohio River settlements to his death in 1799, he gave special attention to the possibilities of water communication between East and West. "What we need most are easy transit lines between East and West as the channel of conveyance of the extensive and valuable trade of a rising empire."[2]

Before resigning his commission as commander-in-chief

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[1] W. A. Meese, "Benefits of River Improvements," Moline (Illinois) Daily Dispatch, February 23, 1905. Clipping in Ellis B. Usher Papers, Florence Wing Library, Area Research Center, Wisconsin State University, La Crosse. Hereafter cited as Usher papers.

[2] Ibid.

of The Continental Army in 1783, he explored transportation routes through the Mohawk valley. After retirement from the army, he turned his attention to the improvement of commercial ties with the West through the Valley of the Potomac. In 1785, the first convention for improving our rivers, called by Washington and presided over by him, met to devise means for improving navigation on the Potomac River.[3]

But the half-century after 1800 was characterized by relatively small appropriations for rivers, by a careful scrutiny of public works bills by the presidents, and by a growing demand for improvements. During this period, adherents of waterways improvement organized their forces, developed new means of presenting their demands, and produced considerable literature on the subject. But by 1860, people in the interior had learned to distrust the uncertain appeals of their representatives in Congress, and chance memorials sent by various sections of the country. Now they began to organize great conventions which could publicly appeal for improvements. The assembling of these bodies had become by 1860 almost a matter of routine.[4]

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[3]Douglas Southall Freeman, George Washington (New York: Charles Scribner's Sons, 1954), VI, 14.

[4]Isaac Lippincott, "History of River Improvements," Journal of Political Economy, XXII (January-December, 1914), 633.

Congress had begun to give attention to rivers in the interior in February 15, 1819, when it passed an act "for making a survey of the water courses tributary to and west of the Mississippi and also, those tributary to and northwest of the Ohio."[5] On April 14, 1820, another act provided funds for making surveys, maps, and charts of the Ohio and Mississippi rivers to facilitate improved navigations.[6] But the first act to make an appropriation for actual work on the streams was not approved until May 24, 1824, when Congress allotted $75,000 for this purpose.[7] The act provided the President with authority to improve navigation of the Mississippi from the mouth of the Missouri to New Orleans by removing trees fixed in the river bed.[8] In March of 1827, Congress authorized another appropriation of $30,000 to be devoted exclusively to the Ohio, and during the next four years, including 1831, $398,000 were appropriated for the "improvement of the navigation of the Ohio and Mississippi rivers."[9]

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[5]William J. Hull and Robert W. Hull, The Origin and Development of the Waterways Policy of the United States (Washington: National Waterways Conference, Inc., 1967), 12.

[6]Ibid., 13.

[7]Carter Goodrich, "National Planning of Internal Improvements," Political Science Quarterly, LXIII (March, 1948), 34-35.

[8]Lippincott, op. cit., 634.

[9]Goodrich, op. cit., 35.

But according to a report of government engineers in 1823, navigation still suffered great delays and losses. The channel of the Ohio between the falls at Louisville and the river's mouth was crossed by twenty-one bars which rendered the stream impassable by steamboats. On the Mississippi uncertain currents, and inadequate shorelines from St. Louis to New Orleans made travel treacherous.[10]

The House of Representatives, to whom the engineer's report was referred, declared that improvement of navigation of the Mississippi and Ohio rivers, which washed the territory of twelve states, could not be a local object, but was instead the responsibility of the federal government. The task was too difficult, if not impracticable, to respond to co-operation among the different states. Thus were introduced the arguments which were driven home with great force in subsequent debates: the commercial importance of the rivers, the impossibility of concerted action by the states, and the necessity of national action. These were opposed by the argument that Congress, under the Constitution, had no power to act unless improvements were clearly national in scope.[11]

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[10] Meese, op. cit., Clipping in Usher Papers.

[11] Lippincott, op. cit., 637.

Nevertheless, calls for improvements continued to grow. During Andrew Jackson's administration Congressmen made several attempts to begin improvements on some of the smaller tributaries of the Ohio and Mississippi. Many of these appropriations were clearly local in character, and Jackson refused to sanction them. It was his belief that the improvement of interior waterways lay more within the province of the states than of the nation.[12] But he signed other bills during the last five years of his administration and Van Buren continued this practice which devoted over $1,045,000 to the improvement of the Mississippi, Ohio, and Missouri rivers.

Because of depression, Congress made no appropriations for these rivers from 1839 to 1842, and this resistance made interior sections more eager for assistance. About 1842 powerful appeals came from a number of cities, including Cincinnati and St. Louis, emphasizing the industrial importance of their regions and the rapid increase of river commerce. These petitions pointed out the need for navigation improvement, and emphasized the great loss of life and property which came from uncontrolled floods and dangerous connecting routes. They asserted that the annual loss on

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[12]Glyndon G. Van Deusen, The Jacksonian Era (New York: Harper and Row Publishers, 1959), 52.

the rivers was far greater than the government's annual appropriations; in addition, there was an indirect loss from river commerce due to delays, excessive rates of insurance, and uncertain freight charges. Of the total number of steamboats built on "western waters" up to 1830, forty per cent had been lost or destroyed by snags or similar obstructions.[13] In the year 1838 snags sank thirty-seven steamboats. In 1839 and 1840 they sank twenty-one.[14] Of the 126 steamboats registered at St. Louis in 1841 and 1842, river obstructions destroyed sixteen. In the following year another eighty steamboats were destroyed.[15]

These were not exceptional losses. A committee in St. Louis attempted to estimate the value of property destroyed on the rivers from 1822 to 1841. Their figures were alarming. From 1822 to 1827 the loss of property on the Ohio and Mississippi "due to snags alone," including steam and flatboats and their cargoes, was $1,362,000. From 1827 to 1841 the loss of cargo and property was

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[13]George R. Taylor, The Transportation Revolution, 1815-1860 (New York: Rinehart and Company, Inc., 1951), 65-66.

[14]Lippincott, op. cit., 638-639.

[15]E. W. Gould, Fifty Years on the Mississippi (St. Louis: Nixon-Jones Printing Company, 1889), 215.

placed at $2,269,000.[16] Statistics on loss of life were discouraging. Forty persons perished on the Mississippi from 1810 to 1830. From 1830 to 1850, 456 persons lost their lives, and tonnage destroyed was valued at $7,113,940.[17] In view of these handicaps, western Congressmen argued that Congress' neglect of internal commerce was an economic drain on the area west of the Appalachians.[18]

Western lobbyists recommended an appropriation of one million dollars to remove obstructions impairing navigation of the Mississippi and its tributaries, but obtained only a small fraction of this amount.[19] In August, 1842, Congress appropriated $100,000 "for building and repairing the necessary boats for carrying on the improvement of the Mississippi, Missouri, and Ohio rivers."[20] From 1842 to 1847 the amount granted for restoration of these rivers was about $575,000 and no further appropriations were made until 1850.

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[16] J. L. Ringwalt, Development of Transportation Systems in the United States (Philadelphia: Railway World, 1888), 138.

[17] Gould, op. cit., 216.

[18] U.S., Congressional Globe, 28th Congress, 1st. Session, Vol. 13, January 16, 1844 (Washington: Government Printing Office, 1844), 150.

[19] Lippincott, op. cit., 640.

[20] Hull and Hull, op. cit., 18-19.

From 1845 to 1860 new elements entered to complicate the river problem. While demands were more urgent and systematic than ever before, appropriations were carefully watched because of the high national debt from the Mexican War. They also suffered because of strict interpretations of the Constitution by a number of Presidents, especially James K. Polk. Total appropriations during these years for general work was about $130,000, but grants for specific purposes added about $917,000 to this sum. Of the latter amount $300,000 were appropriated in 1852 and 1856 for improvement of the Des Moines rapids.[21]

Although presidents from 1845 to 1860 vetoed many river and harbor bills, the demand for public works continued. Appeals continued to come into Washington based principally on the industrial importance of interior regions and navigation handicaps. Losses on the river were larger than ever before. In 1848, fifty-nine steamboats were destroyed at an estimated loss of $590,000, and 130 persons lost their lives. In 1849, eighty-three boats destroyed were valued at $1,585,400. From 1853 to 1860, 3000 fatalities and 1,090 injuries occurred from accidents on the "inland waters." Meanwhile, commerce on the streams

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[21]Lippincott, op. cit., 640-641.

increased greatly during the prosperity preceeding the Panic of 1857, further emphasizing the need for improvements. River trade in St. Louis, for example, exceeded $200,000,000 annually by 1860.[22]

The growth of industry from 1840 to 1860 provided a new element which made neglect of the rivers a matter of concern. New Orleans, and a considerable portion of the South, were apprehensive about the diversion of traffic directly east over lakes and canals. The westward stride of the railroads increased their fears. They dreaded not only the loss of commerce, but the linking of interests between East and West and the loosing of old bonds between the West and South.[23] One principal means of holding the two latter sections together and maintaining old "natural relations," was improvement of the Mississippi River. This, it was believed, would keep a large part of the commerce moving southward.

St. Louis had a serious problem which it hoped to solve by removal of obstructions at the Des Moines and Rock River rapids.[24] This problem originated about 1850

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[22]Ringwalt, op. cit., 138-139.

[23]Taylor, op. cit., 70-71.

[24]Proceedings of the Upper Mississippi River Improvement Association Convention, Quincy, Illinois, November 12, 1902

by the prospective extension of railroads from Lake Michigan to the Mississippi treatening the trade of the upper portion of the river. Unless the rapids were improved to prevent long delays and heavy charges at those points, trade which formerly went downstream would go eastward by rail. The effort to keep traffic moving in its old channels and to thwart diverting influences by railroads became a great force behind the movement for river betterment.[25]

To assist in solving these problems, and also to impress upon Congress the importance of improvements, southern and western states now began to call commercial conventions. Among the earliest of these were the Memphis convention of 1845, the Chicago river and harbor convention of 1847, and the Burlington convention of 1851. Resolutions adopted called for improvement of the Mississippi and its tributaries, deepening of the mouth of the Mississippi, connection of the Mississippi River and the lakes by means of a ship canal, and improvement of the river at St. Louis. Assemblies north of St. Louis, called to the need for improvement of the rapids of the Mississippi.

(Quincy, Illinois: McMein Printing Company, 1902), 55-56. Hereafter cited as Quincy Convention, 1902.

[25] Ibid., 48-49.

By 1856, Congress was talking seriously about the need for river improvement. Adherents recommended changes in the Mississippi from Balize to the Des Moines rapids at a cost of $225,000 a year.[26]

With respect to large appropriations, and the scope of the river work, the periods before and after 1865 stand in marked contrast. Influences stimulating discussion of extended river improvements were an increased population and thus greater representation in Congress from agricultural lands in the West and Northwest, a demand for cheap transportation, the desire to find some satisfactory "regulator" of railway rates, the frequent surpluses in the national treasury, and the liberal financial views of the political parties. Great floods and the problem of conserving natural resources added new elements to the program of improvement.

Before 1865 many insisted that the rivers should be improved because they were the most important means of transportation. Now insistence was based more on the fear that they would lose their present importance. Demands had also become far more comprehensive, and at the same time lobbying became more systematic than before 1865.[27]

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[26] Ibid., 49-50.

[27] Lippincott, op. cit., 645-646.

After the Civil War the platforms of both political parties generally favored an extensive system of river improvements. In the campaigns of 1868 and 1872, they declared that the waterways of the Republic were sufficiently important to demand government aid, and that such help should be maintained long enough to insure permanent improvement.[28]

Between 1865 and 1875 petitions poured into Congress calling for river improvements, and proponents of public works called conventions in Dubuque, St. Louis, St. Paul, Quincy, and Davenport.[29]

The St. Louis convention of 1873 was an unusual assembly in that it brought together congressmen and governors from at least twenty states. The object of the meeting was to submit a single, practical plea for improvements of the Mississippi and its tributaries.[30]

Another important element in the development of the river program after 1865 was the surplus that occured almost

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[28]Kirk H. Porter and Donald B. Johnson, National Party Platforms (Urbana, Illinois: The University of Illinois Press, 1961), 37-40, 48.

[29]Proceedings of the Upper Mississippi River Improvement Association Convention, La Crosse, Wisconsin, October 10, 1905 (Quincy, Illinois: McMein Printing Company, 1905), 63-64. Hereafter cited as La Crosse Convention, 1905.

[30]Quincy Convention, 1902, 48.

annually in the national treasury. These balances reached a considerable figure in the years from 1866 to 1880, and during the 1880's often amounted to over one hundred million dollars. The national debt had been reduced from $1,996,000,000 in 1879 to $891,000,000 in 1890.[31] Revenue was in excess of the ordinary needs of the government, and river advocates urged that this money be spent in improving navigation, and generating national economic growth. In 1870, Congressmen O. D. Conger, of Michigan, argued that every dollar which the government spent in giving security to shipping, would be returned fourfold to the producer, farmer, artisan, and consumer.[32]

The Granger Movement which stirred the interior during a portion of the decade from 1870 to 1880 added momentum to the demand for river improvement. One of the objects of the Patrons of Husbandry was to secure redress for farmers of their grievances against the railroads.[33] Farmers argued

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[31]Davis R. Dewey, Financial History of the United States (New York: Longmans, Green and Company, 1903), 401, 429, 431.

[32]U.S. Congressional Globe, 41st Congress, 2nd Session, Part VII, Appendix, June 13, 1870, (Washington: Government Printing Office, 1870), 477.

[33]John F. Stover, American Railroads (Chicago: The University of Chicago Press, 1961), 127-128.

that river transportation was cheaper than that by rail. Wherever water competed with rails, the railroad rates were lowered to get the traffic. If obstacles which beset this trade were removed, traffic would take to the rivers in greater volume; waterways would force rail rates to lower levels, bringing immense savings to the farmers.[34] Representatives from the interior urged improvements to make the rivers constant competitors of the railroads. In this connection, Representative G. A. Finkelnberg, of Missouri, stated that the greatest need of the day was cheaper water transportation.[35]

In 1879 Congress took an important step in the development of river work by creating the Mississippi River Commission. Prior to that date appropriations were made with scarcely any reference to the improvement of the river system as a unit. The Commission was to devise an economically feasible plan which would give the nation's waterway's a navigable channel at all seasons of the year. From this Commission there came suggested programs which

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[34]Fred A. Shannon, The Farmer's Last Frontier, 1860-1897 (New York: Rinehart and Company, Inc., 1945), 177.

[35]U.S., Congressional Globe, 41st Congress, 2nd Session, Part VII, June 13, 1870, (Washington: Government Printing Office, 1870), 493-494.

were to become the goals of the Upper Mississippi River Improvement Association.

CHAPTER II

ORIGIN OF THE UPPER MISSISSIPPI RIVER IMPROVEMENT ASSOCIATION

The upper Mississippi has long served man; it has borne the Indian canoe, the explorer's pirogue, the pioneer's keelboat, and later during the golden age of the river steamer, the romantic paddlewheelers, so vividly recalled in song and story. The upper Mississippi River, however, has been a rebellious and undependable servant, forcing navigation to accommodate itself to erratic tidal whims. Swift and treacherous rapids erupted in several reaches; in others, submerged rocks and boulders lay in wait for the unwary rivermen. Each storm built up new, uncharted shoals and sand bars and washed hundreds of overhanging trees into the stream to form the "snags," so deadly to the oldtime wooden-hulled river boats. Considering the many perils which beset navigation, it was not surprising that life of a steamer on the upper river during the late nineteenth century was usually very short.[36]

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[36]U.S. Corps of Engineers, Rock Island District, "The Changing Scene on the Mississippi River," A Report from the Department of the Army (Washington: Government Printing Office, 1966), 1.

As early as the 1830's, the federal government, aware of the upper river's important role in the settlement of the Mississippi Valley, sought to improve navigation. The first such effort attempted to remove the most menacing snags, shoals, and sand bars. Dynamiting and excavation of rock in several reaches of rapids cleared a passage, and the closing off of meandering sloughs and backwaters confined flows to the main channel and helped increase depths for navigation in times of low water.[37]

Although the rapids section was improved, another problem remained. In the late summer months, when low water flowed in the river, the channel depth was insufficient for navigation. In 1878, Congress authorized construction of another project for the upper river, a channel with a minimum depth of four and one-half feet from St. Louis through St. Paul. This was accomplished by closing off rapids, revetment of caving banks, and contraction of the channel by a series of wing dams which secured a width of 800 feet and a depth of four and one-half feet.[38] One

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[37] Ibid.

[38] Major C. S. Riche, "History of the Development of the Improvement of the Upper Mississippi River," Proceedings of the Upper Mississippi River Improvement Association Convention, Clinton, Iowa, September 23, 1908. (Quincy, Illinois: McMein Printing Company, 1908), 123-124. Hereafter cited as Clinton Convention, 1908.

unexpected result of the confinement of the water to 800 feet was that the current scoured its own pathway and maintained the desired depth.[39] This enterprise was a direct result of the labors and influence of Senator William Windom of Minnesota, whose advocacy of "cheap transportation routes to the seaboard" made him a pioneer of western river improvements.[40]

By the end of the nineteenth century, however, river commerce was finding it increasingly difficult to compete with railroads. Shallow depths in the river made it necessary for steamers to be small and cargoes light, and therefore uneconomical.[41] The original condition of the channel between the Missouri River and St. Paul was such that at low stages larger boats were unable to proceed further up the river than La Crosse, Wisconsin or Winona, Minnesota, while at extreme low water navigation was impeded at points further down the river.[42]

Though the government had made appropriations,

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[39]Ellis B. Usher, "Mississippi River to be Restored to Old Time Usefulness," Milwaukee Sentinel, May 1, 1904. Clipping in Usher Papers.

[40]Quincy Convention, 1902, 65.

[41]"The Changing Scene on the Mississippi River," op. cit., 2.

[42]La Crosse Leader-Press, October 10, 1905, 1.

supporters of river improvements felt that in view of the length of the Mississippi River, and of the territory it served, appropriations had not been either sufficient or consistent with the interests of the people living in the upper Mississippi Valley.[43] During a period when business in that region consisted almost solely of lumber and log rafting, the four and one-half foot channel was all that was required to accommodate towboats. But with the decline of the pine lumber industry, businessmen along the river felt that they were entitled to the advantages offered by a natural waterway, benefits which could only be achieved by river improvements. They argued that through a proper system of wing dams, revetments, and other devices, the river would be able to dig its own channel and to keep itself free from obstructions to navigation. Naturally they were anxious to use the waterway and keep freight rates reduced through competition between steamboats and railroads.[44] They urged therefore, that the upper Mississippi River be improved to hold not only present but also future commerce.

Only through strong organization could they accomplish

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[43] Quincy Convention, 1902, 18.

[44] Milwaukee Sentinel, February 26, 1905. Clipping in Usher Papers.

their cause and some local groups along the river began to work on the project. In 1902 a committee representing the city of Quincy, Illinois, asked Major C. McD. Townsend, then in charge of the government work on the Mississippi River north of St. Louis, about the possibility of improvements in the river near Quincy. During the interview Major Townsend then in charge of the government work on the Mississippi River north of St. Louis, about the possibility of improvements in the river near Quincy. During the interview Major Townsend asked if any attempts had been made by Congressmen, congressional delegates, commercial organizations or cities along the river to imporve its condition. A gentleman replied, "No, not to my knowledge, but it will be done at once."[45] Thus was begun the Upper Mississippi River Improvement Association.

The gentleman interrogated by Major Townsend, Mr. Lewis B. Boswell, was a strong supporter of river improvements and in many ways the founder of the new association. Born in a home on the banks of the old river in New Orleans, he had spent his life in areas where he could look out over its placid waters. He loved the river; he grieved to see its usefulness impaired through neglect; and he was determined to make it what nature intended it should be, the main commercial artery of the Mississippi Valley.[46]

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[45] Quincy Convention, 1902, 100. [46] Ibid.

The Mississippi, north of St. Louis, represented a very important highway of commerce. Its effect upon rates of freight charged by railroad lines paralleling the Mississippi and those extending miles toward the interior of bordering states, was recognized by many and was of too great an importance to be denied.[47] Those who drew upon the river's services realized that it was necessary to devote time and money, as well as expert skills if impediments to navigation were to be eliminated.[48] But the diversified interests in the upper Mississippi Valley had heretofore failed to organize an effort to persuade Congress to make needed appropriations.[49]

It was this fact and the interest in improving the channel which prompted a call for a convention of representatives from the cities and towns situated between St. Louis and Minneapolis to be held in the city of Quincy, Illinois, November 12 and 13, 1902. The five states on the border of the upper Mississippi, Illinois, Missouri, Iowa, Minnesota, and Wisconsin inaugurated the movement and proposed to prosecute the work.[50]

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[47]Usher, op. cit.

[48]Quincy Convention, 1902, 3.

[49]Ibid., 3-4.

[50]Usher, op. cit.

Boswell, representing the Quincy Freight Bureau and the Chamber of Commerce, gave the keynote address. In calling upon the convention to begin its work, he referred to a public address by James J. Hill of the Great Northern railway, in which the railway magnate remarked that the Mississippi River between St. Paul and St. Louis was not worthy of consideration by Congress, and in which he opposed any improvement on the upper division of the great stream.[51] "One purpose for which we are meeting," said Boswell, "was to declare that the upper Mississippi River should neither be slandered by Hill nor neglected by the government."[52]

The Quincy river convention decided to form a permanent organization and to make a systematic effort to keep the claims of the Mississippi River constantly before Congress. The impression that prevailed before the 1902 convention was that the upper Mississippi River ceased to be a factor of any importance in the regulation of freight rates, could not be made such, and was a fruitless project for Congress to support. The Quincy group opposed this view and sought to convince the national government and the people of the country that the Mississippi River was still

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[51] La Crosse Daily Republican and Leader, November 13, 1902, 1.

[52] Ibid., 1-2.

of great value to local businesses and small communities.[53]

Among the major speakers at the 1902 convention was Major Townsend. In his address, he stated that river transportation was advantageous not only to the Mississippi River communities, but also to those towns and cities along its tributaries.[54] Therefore, he emphasized the need for a federal plan which would aim for improvement of the entire internal water system. Using the Mississippi River as the trunk, the government could plan numerous canal connections to the Great Lakes.[55] He also demonstrated the river's effect on rail rates at competing points and price discriminations practiced where river competition had ceased. He further stated that the project for improving the upper Mississippi was moderate in urging a navigable depth of six feet. This channel would permit boats to move twice the present amount of freight at low water. According to Townsend, this improvement would cost about $25,000 a mile, which was less than was expended in constructing an ordinary single track railroad.

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[53] Cairo (Illinois) Bulletin, November 17, 1905, Clipping in Usher Papers.

[54] Usher, op. cit.

[55] Ibid.

However, Congress appropriated only $400,000 for 1902 of which $75,000 was allotted to local purposes. This left only $325,000, or $500 per mile to be expended upon the river bed. Since it was necessary to maintain structures already built as well as to continue the improvement, this fund was inadequate. As work progressed the cost of maintenance constantly increased. Townsend pointed out that railroads annually expended $1,000 a mile for maintenance alone, that the railroads on the banks of the Mississippi exceeded this amount, and that the river engineer could not be expected to maintain and develop his waterway for one-half the amount the railroad engineer was allowed for maintainance alone. Naturally, the river engineer's progress under these conditions was slow, and the time when railroads would be subject to increased competition from steamboats on the upper Mississippi River seemed remote indeed.[56]

Nearly 132 delegates representing twenty-six cities and towns on the upper Mississippi River attended the Quincy meeting.[57] This large representation, formed after limited notice, reflected the interest which existed in the

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[56] Quincy Convention, 1902, 45.

[57] Ibid., 11-12.

welfare of the upper river. It was proof that the delegates recognized, both as citizens and as businessmen, the importance of the great Mississippi River to every consuming and business interest. For want of opportunity, questions on the care and permanent improvement of the upper river had not been considered at the national level, but this they intended to correct.

So serious were the delegates at the Quincy convention that the Association became dedicated to the improvement of the entire upper Mississippi River. It refused to admit or to consider any questions or plans advocating or pertaining to local improvements. It resolved to ask Congress to recognize the upper Mississippi River as a valuable adjunct of commerce, and to appropriate sufficient funds for its permanent improvement.

CHAPTER III

THE MOVEMENT GROWS

The Upper Mississippi River Improvement Association began a work more important to its valley than any other ever undertaken. Without design for any particular industry or enterprise, the Association attempted to help the economy of a huge region. The prosperity of all who dwelled in the Mississippi Valley, those whose homes were in regions remote as well as those who lived on the banks of the river, depended upon its success.

The Association's plan to develop the river called for the opening and improving of navigable waterways to meet the needs of expanding commerce, and to secure direct and cheaper freight transportation for all marketable products. Those involved with the Association felt that they had acted wisely in the initial step taken at the Quincy Convention in 1902. But their goal required the support of many individuals who lived along the upper river. It also required the support of the press in keeping the question before senators, representatives and the general public. The considerations the Association sought from Congress were not for selfish interests, but for the benefit of those who were identified with the production of the farm,

the mine and the factory.[58]

To present its plan before Congress, the Association hired five lobbyists in October, 1903, to travel to Washington "to work for the interests of the upper Mississippi River, and especially for securing the appropriation they sought."[59]

The president of the Association, Mr. Thomas Wilkinson, of Burlington, Iowa named the committee, selecting the Honorable S. R. Van Sant, Governor of Minnesota, chairman; Lewis B. Boswell, Quincy, Illinois; Ellis B. Usher, La Crosse, Wisconsin; Alonzo Bryson, Davenport, Iowa, and Frank Gaienne, St. Louis, Missouri.[60]

The committee was to visit Washington as soon as possible, using all proper efforts to secure an appropriation to improve navigation on the upper Mississippi River from Cairo to St. Paul. It was also to meet with the Committee on Rivers and Harbors to prepare such data as the Committee might require in its hearings on

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[58] Quincy (Illinois) Herald, December 23, 1903, Clipping in Usher Papers.

[59] Proceedings of the Upper Mississippi River Improvement Association Convention, Davenport, Iowa, October 21, 1903. (Quincy, Illinois: McMein Printing Company, 1903), 7.

[60] Ibid., 7-8.

the request.[61]

In presenting its views to Congress, the Upper Mississippi River Improvement Association set forth strong arguments on behalf of its proposal.[62] It explained that the Upper Mississippi River Improvement Association represented five states contiguous to the upper river, and that its membership included the manufacturing, mercantile and producing industries of these states, as well as all principal lines of commerce and agriculture. The states involved produced the largest amount of agricultural products of any five states in the union and were also great manufacturing centers. Conditions confronting these states in securing cheaper and more direct transportation for the products of factory, farm and mines was such that relief was needed. This aid could come through the permanent improvement of the upper river, and it could be accomplished at a cost of fifteen million dollars, though the U.S. Corps of Engineers made it clear that this estimate could change as more data became available.[63] The memorial emphasized

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[61] The Burlington (Iowa) Hawk Eye, October 22, 1903, 1. Clipping in Usher Papers.

[62] Proceedings of the Upper Mississippi River Improvement Association Convention, Dubuque, Iowa, November 15, 1904. (Quincy, Illinois: McMein Printing Company, 1904), 125-126. Hereafter cited as Dubuque Convention. See Appendix I and II for statistical data.

[63] Lewis B. Boswell, "Report of Secretary," Upper

that benefits from the improvements would not only be confined to towns and cities lying immediately on the river, but would extend to the interior and have an effect upon the cost of transportation in all of the five interested states.[64]

Acting on behalf of commercial interests within their region, the petitioners urged Congress to appropriate funds for the project and courted the Committee on Rivers and Harbors by inviting it to tour the upper Mississippi River as the guest of the Association. In July, 1904, Theodore E. Burton, chairman of the River and Harbors Committee, accepted the invitation. The party, consisting of members of the congressional committee, other members of Congress, representatives of the United States Corps of Engineers, and the lobbyists of the Association, left St. Paul on August 27, 1904 and arrived in St. Louis on August 31st. Although Burton and other members of the congressional committee had but a short time to spend on the inspection, they used it carefully and studied conditions on the river.

Mississippi River Improvement Association Bulletin, Quincy, Illinois, February 29, 1904. Usher Papers.

[64]Dubuque Convention, 1904, 8.

This represented one of the few times in the history of the United States that the Rivers and Harbors Committee of Congress had formally inspected the upper Mississippi River. The waterway's grandeur and its importance as a great highway of commerce impressed the congressmen, and was one of the Association's first achievements.[65] The Association believed that every member of the Committee on Rivers and Harbors was in favor of improving the upper river, but that it would take time to study the problem. There were others who thought the congressmen would like to be more liberal towards large river improvements, such as the upper river, but that their hands were tied by congressional parsimony. The Committee could not expend more than its allotted fifteen to eighteen million dollars a year and this sum was to be divided among all the rivers and harbors improvements in the United States.[66]

The Committee, on March 3, 1905, reported out a bill providing for a survey of the river from the mouth of the Missouri River to St. Paul, and an estimate of the cost of creating a six-foot channel.[67] The Corps of Engineers

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[65] Ibid., 24-25.

[66] St. Paul Dispatch, September 1, 1904, 1-2. Clipping in Usher Papers.

[67] U.S. Congressional Record, 58th Congress, 3rd Session,

assigned Major C. S. Riche, Rock Island District, the duty of fulfilling this task. Riche estimated that twenty million dollars would be required to construct a permanent, all weather channel, with six feet of water, from Minneapolis to St. Louis. The river was broken into various work sections and estimates given as follows:

St. Paul to Lake Pepin	$ 763,950.00
Lake Pepin to Winona	1,287,500.00
Winona to Wisconsin River	2,453,033.00
Wisconsin River to Bellevue	2,065,350.00
Bellevue to Rock Island	2,516,585.00
Rock Island to Burlington	2,389,854.00
Rock Island Rapids	3,700,000.00
Burlington to Hannibal	2,283,996.00
Des Moines Rapids	500,000.00
Hannibal to Missouri River	1,900,000.00
Total	$19,860,348.00[68]

With the survey of the upper river secured, the Association looked forward to its fourth annual convention

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Vol. 39, Part III, March 3, 1905, (Washington: Government Printing Office, 1905, 3992.

[68]U.S. Corps of Engineers, Rock Island District, A Report from the Department of the Army (Washington: Government Printing Office, 1906) Usher Papers.

to be held in La Crosse, Wisconsin, on October 10 and 11, 1905. Resolutions previously passed in Quincy, Davenport, and Dubuque had been successfully carried out, and the next step was to formulate a plan to secure the improvement. Although the survey was in progress, the Association realized that its labors had not ended.[69]

There were several major obstacles to be overcome. One of the problems with which members had to contend was the opinion that the upper Mississippi was fit only for floating logs and lumber, and that lumbermen were seeking the improvement for their own benefit. This was an erroneous impression, for lumbermen were personally involved less than any other class of businessmen.

The Association defended its position by emphasizing that in 1905 there was already a channel of four and one-half feet in the upper river. This was sufficient for rafts of logs and lumber, but inadequate for boats carrying heavier freight. Consequently, all major freight going abroad from Minneapolis and all products coming West, were shipped by rail at greater cost than that provided by water transportation. It was these commercial interests for whom the Association sought improvements. Though lumbermen

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[69]La Crosse Convention, 1905, 8-9.

joined the movement, their immediate needs had already been met.[70]

A second major obstacle facing the Association was lack of national recognition. Congressman John J. Esch of La Crosse, Wisconsin, a strong supporter of river improvements and a champion of anti-monopoly legislation against railroads and freight rates, argued that until more people saw the benefits derived from river improvements, they would not support them. Without that support, the appropriations would never be made.[71] In Esch's opinion, one obstacle standing in the way of an appropriation for the upper Mississippi River was the lack of general regional support for the improvement. Representatives in Congress from the five states seeking the improvement totaled eighty-two members. These men, however capable they were or however potential their influence, would never be able to secure monies of sufficient amount to accomplish the Association's goal. Similar demands came from all parts of the country, and unless justified in terms of the national interest they were seldom met. For the Association to

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[70] La Crosse Tribune, October 10, 1905, 1.

[71] Letter from John J. Esch to Thomas Wilkinson, September 2, 1905 in Letters and Correspondence of Honorable John J. Esch (Madison: Wisconsin, State Historical Society, 1905), 1.

secure its funds, it would have to have support from Representatives and Senators from states that would be only indirectly benefitted by the proposed improvement.[72]

Acting upon the suggestions of Congressman Esch, the Association decided to join other organizations seeking Congressional recognition for river improvements. President Wilkinson appointed a delegation to attend a Washington meeting in January, 1906, of the National Rivers and Harbors Congress.[73] This group, first organized in the fall of 1901, was reorganized on a stronger basis in 1906. Composed of individuals, corporations, commercial organizations, and waterway associations from thirty-three states, it sought to form a national body to educate people in the importance and value of inland waterways and in the need for larger and systematic appropriations by Congress for river and harbors improvement. Its goal was an annual appropriation of fifty million dollars for that object.[74]

To further develop national recognition for its regional goal, the Upper Mississippi River Improvement

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[72] Ibid., 2-3.

[73] La Crosse Convention, 1905, 11.

[74] Madison (Wisconsin) Democrat, November 2, 1906. Clipping in Usher Papers. See Appendix III for statistical data.

Assocation sought unification with the Ohio Valley Improvement Association. The goal of this organization was improvement of the Ohio River from Pittsburg to Cairo, Illinois. In 1905, each President of the respective groups, Mr. Thomas Wilkinson and Mr. John L. Vance, gave the keynote address at the other's convention. Their meetings symbolized a merging of purpose and strength for improvement of the two great inland waterways. Together, fourteen states bordered the two rivers, containing a population of 34,335,717 or forty-five per cent of the population of the whole country.[75] The two Associations estimated that in these same states, the value of farms was $12,128,844,175, or fifty-nine per cent of the national total, the value of manufactured articles was $6,244,849,320, or forty-eight per cent of the nation's production, and capital invested in manufacturing industries $4,434,316,233, or forty-six per cent of the total invested in the nation. The number of wage earners employed in these manufacturing industries was 22,285,474, or thirteen per cent of the entire labor force.[76] Of the $232,904,004

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[75] U.S. Department of Commerce and Labor, Statistical Abstract of the United States, 1909 (Washington: Government Printing Office, 1910), 44-45.

[76] Cairo Bulletin, November 17, 1907. Clipping in Usher Papers.

in internal revenue taxes collected during the year 1904, the fourteen states contributed into the United States treasury the sum of $164,603,022 or seventy per cent of total revenues. These facts demonstrated clearly the relative commercial importance of these states to the other thirty-one states in the union.[77]

Both Associations believed that they were justified in demanding that these two important highways of commerce be improved for the benefit of the nation. They also believed that the fourteen states bordering on these two rivers, with their commercial, mining, manufacturing and agricultural significance and their 186 of 386 representatives in Congress, were powerful enough to insist that river improvements be inaugurated for the Mississippi Valley.[78]

A final argument which the Upper Mississippi Organization emphasized was that benefits to the country and to the valley would be made greater through ultimate completion of the Panama Canal. The waters of the Mississippi River, from its source to the Gulf were tributary to and a component part of the proposed Panama Canal route. The isthmus waterway was destined to become an important factor

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[77] Ibid.

[78] La Crosse Tribune, October 11, 1905, 3.

in transporting grain, livestock, and products of the field and factories directly to South America, Australia, and Asia from the Middle West. The Association emphasized that with the Channel constructed, and the upper Mississippi River adapted to navigation of larger craft, it would no longer be necessary to ship articles of commerce from the Mississippi Valley east to the Atlantic seaports in order to secure water rates of freight to the Pacific.[79]

The Mississippi group also argued that the Panama gateway would establish new commercial balances and shift the country's trade center to the Mississippi Valley. It would do this just as The Erie Canal, opened in 1825, ended the contest for supremacy among Atlantic coast cities and gave New York an insurmountable lead over its rivals, Philadelphia, Boston, and Baltimore. Mills would be nearer sources of supply, and four-fifths of the leading commodities consumed in the United States would be nearer their markets.[80]

The center of production of the most important cereals, corn, wheat, oats, barley and rye, was in Illinois, a few miles north of Quincy. Flour and grist mills,

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[79] Charles M. Harvey, "The Panama Canal and the Mississippi Valley," World's Work, VII (February, 1904), 4426.

[80] Ibid.

following their raw materials, were clustered in the upper Mississippi. In the valley, also, was the center of production of iron ore, coal, lead, zinc, tobacco, timber, petroleum, and other important commodities. The center of the country's manufactures was in Ohio, and the center of population was moving from Indiana to the Mississippi River.[81]

The Upper Mississippi Association hoped that sentiment for the Panama Canal would generate enthusiasm for improvements on the upper Mississippi and Ohio Rivers. Opening the canal would mark a new era for commerce and every business enterprise in the Mississippi Valley could feel the impact of this new opportunity to increase markets. With the Panama project scheduled to be completed before 1915, the Association urged Congress to complete improvement of the two rivers so that they could be fully utilized in transporting trade and commerce at minimum cost.

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[81] Ibid., 4427.

CHAPTER IV

WATERWAYS VERSUS RAILROADS

By 1907, improvement of rivers and harbors for the betterment of inland navigation had become a perplexing and absorbing subject of discussion. There was indeed something to the proposal, as the Upper Mississippi River Improvement Association and the Ohio Valley Improvement Association suggested. The navigable length of rivers in the United States was more than twenty-five thousand miles; yet Congress continued to be reluctant to make appropriation needed to make them efficient avenues of trade.

Since the 1880's, the United States had lived in an era of phenomenal railroad construction, and by the end of the decade far more than half the road mileage of the world was located within this nation. As the railroad spread, the usefulness of rivers was forgotten.[82] There were many who doubted that the country could make these waterways a part of the nation's transportation system. These people based their position on the amount of travel on the Mississippi River, where, they claimed, one could travel for miles without seeing a single boat. Few tow

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[82]Francis G. Newlands, "Use and Development of American Waterways," Annals of American Academy of Political and Social Science, XXXI (January-June, 1908), 50.

boats ever used the stream. Another point stressed was the neglect of river towns. Wharves were rotting, and the river fronts were occupied largely by railroad tracks. These trains, running at frequent intervals along the banks, were a symbol of how thoroughly rails had absorbed the commerce of the region.[83]

Neglect of rivers within the United States had come about for many reasons, but primarily because of competition from railroads. The roads had successfully underbid barge owners during the navigation season and then afterward raised their rates. In the five decades between the Civil War and World War I the volume of the railroad's gross operating revenue increased at least twelvefold, from perhaps $300,000,000 in 1865 to over $4,000,000,000 in 1917. Also, the railroad magnate seriously objected to losing business or to carrying it at a loss. He solved this dilemma by going into the shipping business. The railroad companies carried the freight but gave the shipper the option of sending it by land or water. With this form of competition, the rail lines possessed a fairly complete monopoly of the nation's commercial freight and passenger and practically drove waterways out of business.[84]

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[83] Ibid., 55.

[84] John F. Stover, op. cit., 105.

Too, the federal government failed to provide and to maintain a stable, navigable channel. River advocates believed that railroad lobbyists had been influential in obstructing legislation for the improvement of waterways. They argued that the influence of the transcontinental railways had, year by year, systematically aided in cutting down appropriations for the Upper Mississippi and other waterways. Reports by the United States Corps of Engineers emphasized that the greatest barriers to safe navigation on the Upper Mississippi were the numerous railway bridges.[85]

Thirdly, neglect of the rivers had come about through the inability of steamboat men to meet increased rail competition with more enterprising management. Owners continued to use outdated boats unfitted to the requirements of modern business and travel. Owing to various inadequate conditions on the river, no incentive could be offered for investment of money in modern steamboats and proper equipment capable of carrying large tonnage.[86] In short, neglect of the rivers seemed to be a result of

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[85] Quincy Convention, 1902, 46.

[86] Proceedings of the Upper Mississippi River Improvement Association Convention, Minneapolis, Minnesota, October 14, 1906, (Quincy, Illinois: McMein Printing Company, 1906), 125. Hereafter cited as Minneapolis Convention, 1906.

the liberal action Congress took towards railroads by encouraging their continued construction. In 1850, the United States government had a public domain of approximately 1,400,000,000 acres, vacant, unoccupied, and for lack of transportatinn, largely unusable and unsalable. Much went to the railroads though the amount of land actually patented by roads was but 131,350,534 acres.[87]

Land grants to railroads were a controversial issue and it was impossible to fully evaluate Congress' wisdom in making these subsidies. Whatever may have been its shortcomings, the land grant policy touched off national and individual energies which accomplished one of the greatest engineering, construction, and colonization projects undertaken in the United States. The land grants did not build the railroads, but they furnished a basis of credit which made their construction possible. In so doing, they did what never had been done before, they provided transportation ahead of settlement.[88]

The Upper Mississippi Improvement Association and other river agencies, without making formal complaints,

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[87]Robert S. Henry, "The Railroad Land Grant Legend in American History Texts," Mississippi Valley Historical Review, XXXII (June-March, 1945-1946), 171-172.

[88]Ibid., 192.

felt that Congress had been far too liberal toward railroads than they were toward river improvements. Unfortunately, owing to the rapid and sometimes premature development of the country by the railroads, the value of rivers to transportation was ignored, and their influence upon the commerce of the people overlooked.[89] The Upper Mississippi Assocation and other groups hoped to bring this matter to the public's attention and to create sentiment in favor of the river development.

By 1907, there was a remarkable decrease in the river traffic on the Mississippi and most of its tributaries. The Burlington Hawk Eye estimated that between 1889 and 1906 the Upper Mississippi had lost eighty-five per cent of its traffic, the Illinois River forty-one per cent, the Missouri and other tributaries above St. Louis forty-two per cent of their traffic. This was a total loss of seventy-two per cent for the upper river system. The Ohio River system had lost three per cent and the lower Mississippi system fifty per cent of its traffic, which was a total lost of thirty-one per cent for the entire

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[89]Robert W. Fogel, "Railroads in American Economic Growth," Journal of Economic History, XXII (June, 1962), 165-166; Taylor, op. cit., 102-103.

Mississippi system. Traffic had declined from 28,289,000 tons in 1889 to 19,521,000 tons in 1906. The upper Mississippi River decrease was mainly in shipments of farm products, coal, iron ore and general merchandise.[90]

The Mississippi organization believed one of the most important factors in the decrease of water traffic was the relationship between the two major forms of transportation. A railroad could be constructed to almost any part of the country, while the line of a river was fixed by nature. Railroads were adaptable to newly arising and evershifting demands of producing areas and markets. Railroads could reach cities and towns, factories and warehouses while boats or barges were confined to waterways. The rapid growth of inland cities emphasized a development dependent upon railroads alone.[91]

But while railroad expansion in the United States had impressed the world, it had by 1907 proven to be inadequate in meeting the production demands of the country. Efforts of the railways to monopolize the carriage of cheap natural products had congested traffic and produced

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[90] The Burlington Hawk Eye, January 24, 1907. Clipping in Usher Papers.

[91] La Crosse Chronicle, July 31, 1907, 1-2.

a near breakdown in the entire transportation system.[92]

The development of railroad transportation since the year 1880 had been equaled. Yet this growth had lagged far behind the increase of the nation's farm products, factory productions, the output of mines, forges, steel and iron mills and other industries of the United States. Domestic and foreign commerce had increased by 1907 so that the railroad systems had become admittedly and grossly inadequate to the successful handling of commodities.[93]

One cause of this congestion was the unprecedented growth of population. In 1890 the United States had a population of 62,979,766. In 1900 it was 84,371,985.[94] And by 1910, it was predicted to be close to 100,000,000. Thus, there was a need for more goods and consequently more traffic.[95]

Increased demand by 1900 of farm and manufacturing machinery and applicances had quadrupled employment.

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[92]Slason Thompson, A Short History of American Railroad (New York: Appleton and Company, 1925), 313.

[93]Ibid., 296-297.

[94]U.S. Bureau of the Census, Historical Statistics of the United States (Washington: Government Printing Office, 1949), 25.

[95]U.S. Corps of Engineers, Rock Island District, A

In 1890 the value of farm products of the United States not including livestock was $2,460,170,454. In 1900 it was $4,739,118,752, or an increase in ten years of approximately 100 per cent. The Secretary of Agriculture in his annual report for the year ending December 31, 1906, estimated the total value of agriculture at $6,974,000,000, or an increase in fifteen years of approximately 300 per cent. The bulk of this increase in farm products had been in the West, South, and Southwest. In 1890 the value of manufactured products of the United States was $9,372,378, 384, in 1900 $13,010,036,514, and in 1905 it had reached $14,808,147,089. This was an increase of approximately sixty per cent in fifteen years.[96]

Railroad capacity was taxed greatly to meet the requirements of this commerce. In the five decades after the Civil War, American railroads had made great advances in mileage, uniformity, and general efficiency of operation. Nevertheless, they were experiencing one the most difficult financial troubles in their history in the years before World War I.

Report from the Department of the Army, May 17, 1907 (Washington: Government Printing Office, 1907), 1. Usher Papers.

[96] Ibid., 2.

A major cause of the financial troubles was the steady rise in the costs of railroad operation, without any corresponding increase in railroad rates and earnings. Between 1900 and 1915 the general price level in the country went up about thirty per cent. But rail costs for fuel, taxes, and labor increased fifty per cent for the same period. Railroad taxes tripled in amount, while gross earnings only doubled in the fifteen years.[97]

However much the nation had relied upon the railroads for quick transportation of persons and of products, it became clear after 1900 that the rivers should also be used. Some urged that they become properly improved, with their beds made stable and their courses made reliable for the transportation of bulky merchandise. The country's business required their improvement to relieve congestion on the rails.[98]

For many years there was no mutual interest between river and rail, only rivalry and antagonism. Analysts believed that with water rates being cheaper than rail, improvement of rivers would reduce rail rates below the point of profit, and that vast quantities of freight would

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[97]Stover, op. cit., 182.

[98]Newlands, op. cit., 51.

move by water. Hence, railroads gave little or no support to river improvements.[99]

Railroad manager James J. Hill, a major antagonist of advocates for river development, declared that water competition should not exist and that, if he were given the money with which to build a double-track railway beside the proposed enlarged Erie Canal, he would turn the canal into a lily pond. The Mississippi River, he declared, could never be made an efficient instrument of commerce until its bottom had been lathed and plastered. But by 1906, Mr. Hill and other railroad owners were changing their views. They realized that vast sums of money had to be expended in rail improvement or they would have to call in the aid of the waterways.[100]

In April, 1906, railway manager Edward H. Harriman, who controlled the Union Pacific, Southern Pacific and Illinois Central, stated that the railroads had reached the limit of their present carrying capacity and that unless they could improve their facilities in some manner, they would be forced to stand where they were.[101] According

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[99] J. E. Ransdell, "The Nation and its Waterways," Milwaukee Sentinel, March 17, 1907, 11. Clipping in Usher Papers.

[100] Ibid.

[101] Milwaukee Free Press, April 16, 1906, Ibid.

to Hill, in his testimony in Minneapolis before the Interstate Commerce Commission, the business of the country increased eleven per cent from 1895 to 1905, while facilities for moving this commerce increased only twenty per cent.[102] He and other railroad experts stated that they would need at least 73,333 miles of new railroad to relieve the congestion. This would require an expenditure of over a billion dollars, five years of time, and the service of two hundred thousand men in order to equip the railroads adequately to handle the commerce of the United States.[103]

The inability of the railway systems to handle growing traffic caused the Upper Mississippi Association and other river organizations to direct even more attention to the interior waterways as a means of increasing the nation's transportation facilities. Railroad people joined in, urging development of inland waterways to supplement rails. It was the judgment of both groups that rivers and railroads should be friends not rivals. The country simply had to look to its waterways for immediate relief of freight pressure.[104]

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[102] Minneapolis Journal, December 19, 1906, Ibid.

[103] Minneapolis Journal, Ibid.

[104] Milwaukee Free Press, March 31, 1907, Ibid.

The major problems were to devise methods of transportation which would carry the commerce, to relieve freight congestion and to supply more adequate transportation terminals, especially for the waterways. The United States was favored with numerous rivers that could be improved to a navigable condition. The Upper Mississippi Association believed that these waterways would not only be effective in transporting commerce, but would also be a most effective regulator of railway traffic and rates.[105] They constantly stressed that water rates moderated railroad rates. In support of their view, the Association, in 1905, gave statistical evidence comparing the higher railroad rates in areas of no water competition with those where competition existed.[106]

According to the census of 1900, the farmers of the five states represented by the Upper Mississippi Improvement Association produced in 1899 about forty-six million tons of cereals, and owned four hundred and fifty million dollars worth of livestock.[107] These farm products had to seek a

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[105] Department of the Army, May 17, 1907, 3, Ibid.

[106] La Crosse Convention, 1905, 167. See Appendix IV for statistical data.

[107] U.S. Bureau of the Census, Twelfth Census of the United States: 1900 (Washington: Government Printing Office, 1906), 529-530.

market and to pay the tariff demanded by the carriers. Farmers expected to receive from a reduction in freight rates of one-half cent per 100 pounds on these products alone, substantial increased profits. With improvement of the river so that it could always be navigated by steamers towing large fleets of barges, there was little question but that prevailing tariffs would be materially reduced.[108] The river organization believed that the two forms of transportation could now help each other. Rivers could carry heavy freights, such as coal, structural iron and steel, lumber, cereals, cotton and thereby prevent congestion. Meanwhile, railroads could carry lighter and higher class freights. Well improved rivers and cheaper rates would cause a rapid increase in population and manufactures, resulting in more business for both the river and railroad.[109]

The policy of restoring the commerce of the nation's inland waterways was considered a difficult task. A major problem would be the task of providing facilities for assembling and distributing products carried on the rivers.

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[108] Minneapolis Convention, 1906, 126.

[109] Ransdell, op. cit., Usher Papers.

Terminal facilities at the river towns were very poor, and these accommodations meant nothing unless connecting rail lines were able to distribute products in the interior. There was little doubt that the old method of handling river traffic over steep, muddy, rocky landings was too inconvenient, too expensive, and too hazardous to be attractive to shippers. The cost of loading and unloading freight by manual labor was a heavy item of expense, equal to 250 miles of haulage of the average railway shipment, and about 2,000 miles of the average water shipment. This represented almost one-half of the freight charge for these distances. It was this problem which forced shipments to the railroads, resulting in higher rates on freight.[110]

The Association thought it necessary to bring railroads into the most intimate relations with the river carriers, so that one system would supplement and aid the other. In seeking a solution, four fundamental accomplishments were necessary to meet the special conditions of the port. The first was a substantial and permanent concrete wall, built parallel with the stream, to receive and discharge cargo and passengers. The wall had to be above high water and on a level with adjacent streets and railroad tracks.

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[110] Ibid.

The second was to have safe fireproof warehouses of ample capacity, built on the wharf, for storage of incoming and outgoing freight. The third task was installation of modern freight handling machinery, adapted for quick and economical loading and unloading of all kinds of cargoes. This would eliminate expensive manual labor. Finally, there would have to be a connection of the waterways with all railroads and switch tracks within the city. This would co-ordinate water with rail transportation to and from points in the interior, and with local production and distribution.[111]

The Upper Mississippi Improvement Association strongly emphasized that unless the actual physical co-ordination of the railways was secured, it could not insure the full use of the river. By 1907, this cooperation began to enlarge and rail and water men together urged Congress to fulfill their needs.

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[111] Department of the Army, May 17, 1907, 5-7, Ibid.

CHAPTER V

APPROPRIATIONS AND SUCCESS

Growth of sentiment throughout the country for development of the nation's interior waterways, had by 1907, awakened people to this vast economic aid provided by nature. Since its beginning, the Upper Mississippi River Improvement Association had sought to incite this feeling. Now, its program was underway. River advocates were certain that Congress could no longer refuse to supply funds for river improvements. The congestion of traffic, the competition with foreign countries, and public opinion seemed to demand improvements.

Since its meeting in Minneapolis, 1906, the Upper Mississippi River Improvement Association had made steady progress in its effort to gain recognition from Congress for the upper Mississippi River. By persistent effort, it succeeded in securing passage of a law which recognized the six-foot channel as a desirable depth for the upper Mississippi. But Congress had to appropriate sufficient sums, annually, to enable the United States Engineers to undertake the project.[112]

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[112] Proceedings of the Upper Mississippi River Improvement Association Convention, Moline, Illinois, October 22, 1907. (Quincy, Illinois: McMein Printing Company, 1907), 3. Hereafter cited as Moline Convention, 1907.

The estimated cost of this project was $20,000,000. Some believed that this was too much to spend on the upper river, but the Association argued that Congress must now recognize the value of waterways and authorize adequate funds. The amount appropriated for all river and harbor improvements for the year ending June 30, 1906, was $18,181,875. The Association believed that the amount spent for the nation's commerce was too small when compared with other appropriations. They also claimed, in co-ordination with the Rivers and Harbors Congress, that the country was big enough and rich enough to appropriate at least fifty million dollars annually for river and harbor improvements. Each year farmers could save that amount by improved transportation facilities for their products and further savings would accrue to the rest of the nation's commerce.[113]

The major goal which the Upper Mississippi Association had been striving for since 1902, was finally attained in 1907. Congress recognized the six-foot channel project for the upper Mississippi River, and enacted the largest appropriation in its history for rivers and harbors, $34,631,612 in immediate funds, and authorized contracts of $48,834,526, making a total of $83,466,138. Under the

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[113]Minneapolis Convention, 1906, 129.

authorization clause, various works would be placed under contract and paid for from year to year through further appropriations.[114]

The new River and Harbor Bill was of particular value to the Mississippi River. It provided for general improvement of the river, for extension of the levee system and for betterment of navigation. Secondly, it provided for river impairment from the mouth of the Missouri River to St. Paul. Finally, it appointed a board to report on the practicality and desirability of constructing a navigable channel from St. Louis to the Gulf.[115]

The Upper Mississippi Association received five hundred thousand dollars per year, for four years.[116] Under the direction of Major C. S. Riche, plans for the improvement of the upper river were quickly converted into action. The work was subdivided and contracts arranged to cover each of several divisions. The Rock Island

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[114]Joseph E. Ransdell, "Program for Improvement of American Waterways," The Annals of the American Academy of Political and Social Science, XXXI (January-June, 1908), 40.

[115]Robert M. Brown, "Recent Legislation on the Mississippi River," The Popular Science Monthly, LXXI (July-December, 1907), 134.

[116]Moline Convention, 1907, 35.

District embraced the entire reach of the upper Mississippi from the mouth of the Missouri River to the Twin Cities. This river reach was divided into sections, with lengths varying from twelve to 136 miles. Each division was controlled by a civilian engineer responsible to a District supervisor.[117]

The purpose of the six-foot channel was to allow steamboats to carry greater loads and increase their proportion of total goods carried. The increased depth was to be accomplished by dredging, rock excavation, and construction of contraction works consisting of rock and brush wing or spur dams. This was necessary for narrowing the main river channel, and closing off sloughs. Lateral dams and locks were to be constructed to deal with the troublesome rapids.[118]

Labor parties were distinctive features and a familiar part of the river scene. The six-foot channel project required a great deal of land labor and the District's working force was usually around 1000 men. Organized into parties of sixty to eighty persons they worked the

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[117] Report from the Department of the Army, July 7, 1906. Usher Papers.

[118] Riche, op. cit., 124-216.

river, often at isolated trouble spots, for weeks at a time. Each labor party was a small floating community composed of steamboats, barges, dredges, launches, office, inspection, and drill boats. The living quarters for the men, appropriately called "quarterboats," were two story floating dormitories. The usual size was 110 feet long and twenty-four feet wide, with the first deck housing the kitchen and dining room; the second floor was the sleeping quarters.[119]

Although life was hard and rough in the labor camps, many made it their way of life for years, for there were "carefree" times to engage in fishing, bull sessions, practical jokes, and the occassional Saturday night drinking fest. It was this last recreation which city fathers along the river often viewed as a mixed blessing.[120]

The government provided further compensation for the loneliness of the work by "setting a good table." Every week, two government storeboats tied up at the Davenport levee to load up with supplies for labor parties. These floating general stores carried huge ice boxes holding from

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[119] Department of the Army, July 7, 1966, 2. Usher Papers.

[120] Ibid.

ten to twenty tons of ice to keep perishable items. The quality of food was high, and even in that less fastiduous day, only Federal Government-inspected meats could be served on the quarterboats. After the storeboats had loaded up, one proceeded upstream, the other downstream, to supply labor parties along the way.[121]

With the approach of winter, the fleet went into the harbor to be protected from ice and to be repaired. The Rock Island District maintained seven of these winter harbors, Milan, Illinois being the busiest. During some winters, the Rock Island District would have nearly 400 items of floating equipment in winter quarters.[122]

By 1908, work on the six-foot channel for the upper Mississippi River was well under way. From the $500,000 allotted for the first year's work, much was used to construct the new dredges, barges, and other equipment to begin improvements. During the first year work crews concentrated on localities where there was the greatest trouble rapids. During 1908, $80,000 was spent on improvements between Rock Island and Hannibal, Missouri. Other efforts began in the vincinity of St. Paul, Red Wing, La Crosse,

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[121] Ibid., 3.

[122] Ibid., 4.

Prairie du Chien, and Gutenberg.[123] By October, 1909, $910,782 had been expended on the six-foot channel project.[124] But as river improvements continued, it became apparent that Congressional appropriations in 1907 were insufficient to carry out the six-foot project within a reasonable length of time. The Corps of Engineers estimated that if only $500,000 was appropriated each year, it would take forty years to complete its work. Thus, the upper river would continue to remain a slumbering giant, impotent, and useless for purposes of commerce, and transportation. The Association believed its cause too meaningful to allow this to happen.[125]

Greater appropriations were needed. The Association argued that great savings could be made if the project were completed within ten years. To that end, it urged Congress to increase the annual allotment to two million dollars, securing reasonable progress and cheaper overall

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[123]Lewis B. Boswell," Report of Secretary," Upper Mississippi River Improvement Association Bulletin, March 28, 1908. Usher Papers.

[124]Proceedings of the Upper Mississippi River Improvement Association Convention, Winona, Minnesota, October 6, 1909. (Quincy, Illinois: McMein Printing Company, 1909), 22. Hereafter cited as Winona Convention, 1909.

[125]La Crosse Chronicle, January 23, 1908, 1.

cost.[126]

At this point, development of interior water commerce was suddenly boosted by support from President Theodore Roosevelt. Disappointed with the progress of river improvements and transportation, Roosevelt, in March, 1907, appointed an Inland Waterways Commission,[127] with Theodore E. Burton as chairman. The duty of the commission was to investigate the use of water for navigation and other purposes. It was to recommend plans to the President for the development and utilization of all national natural resources relating to water.[128] The Inland Waterways Commission was an outgrowth of agitation in the Mississippi Valley for the improvement of the waterways, and in appointing the commission, Roosevelt asserted that control of the nation's waterways lay with the federal government and that it must bear the responsibility of improving and maintaining them.[129]

By request of the Commission, Roosevelt and its

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[126]Clinton Convention, September 22, 1908, 25.

[127]George E. Mowry, The Era of Theodore Roosevelt (New York: Harper and Brothers, Publishers, 1958), 216.

[128]Newlands, op. cit., 49.

[129]Milwaukee Sentinel, March 17, 1907. Clipping in Usher Papers.

members inspected the Mississippi River in September, 1907. The trip which featured daily meetings with government engineers and interested parties in various cities, added impetus to requests for funds and improvements.[130]

In an address in Memphis the President stated that the Mississippi Valley was politically and commercially more important than any other valley in the nation. Here more than anywhere else, would be determined the future of the United States. No man could foresee the limits of development in the Mississippi Valley, he stated, and urged extensive utilization of the Mississippi and its tributaries.[131]

There was nothing equivocal in the President's words, and advocates of river improvement believed he was deeply concerned with the matter. Few presidents ever took as much interest in waterways as Roosevelt, and his apparent determination to deal with the problems, captured the hearts of the rivermen.

The Upper Mississippi Association then sent another committee to Washington in December, 1908. It asked

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[130] W. F. Saunders, "President Roosevelt's Mississippi Journey," Review of Reviews, XXXVI (October, 1907), 456.

[131] From the address delivered by President Roosevelt to the Deep Waterway Convention at Memphis, Tennessee, October 4, 1907. Milwaukee Free Press, October 4, 1907. Clipping in Usher Papers.

Congress for legislation providing $2,000,000 for completion of the Upper Mississippi project. The committee then tried to lobby its measure through Congress, but was at first unsuccessful.[132]

Help came from Mr. James A. Tawney, Congressman from Winona and Chairman of the Committee on Appropriations, who introduced a bill in January, 1909 authorizing Congress to continue work on the six-foot channel of the Upper Mississippi. This project was to be completed on or before July 1, 1918. The bill authorized appropriations of two million dollars per year for improvement of the upper river between St. Louis and St. Paul,[133] and provided all that the Association and its lobby had worked so hard to achieve.[134]

On February 14, 1910, the Committee on Rivers and Harbors submitted to the House its report on rivers and harbors. It stated that there was much sentiment throughout the country in favor of river improvements, and this national feeling had convinced the committee to approve

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[132]Winona Convention, October 6, 1909, 19-20.

[133]U.S. Congressional Record, 60th Congress, 2nd Session, Vol. 43, Part III, January 13, 1909 (Washington: Government Printing Office, 1909), 699.

[134]Winona Convention, 1909, 19-20.

the bill.[135]

This legislation was a great victory for the Upper Mississippi River Improvement Association. It provided an appropriation of two million dollars per year for twelve years to improve the upper river and to secure and maintain a channel of six-feet. President Taft signed the bill into law on June 25, 1910.[136]

The six-foot channel project served its purpose well for many years, but during the 1920's, declining river traffic made it evident that the river was being made obsolete by the trucking industry. Then advancements in engineering knowledge and techniques brought commerce flowing back into the inland waterways. New ideas in lock and dam construction, the roller-gate dam, creation of electrical "push-button" control of great mechanical installations, and the introduction of Diesel-powered river vessels with increased power and efficiency all revitalized inland water transportation.

Diesel engine vessels were capable of pushing a dozen

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[135] U.S. Congressional Record, 61st Congress, 2nd Session, Vol. 45, Part II, February 14, 1910 (Washington: Government Printing Office, 1910), 1845-1846.

[136] U.S. Congressional Record, 61st Congress, 2nd Session, Vol. 45, Part IX, June 25, 1910 (Washington: Government Printing Office, 1910), 9118; La Crosse Chronicle, June 25, 1910.

or more heavily-laden steel barges with or against the current. With these new techniques of inland navigation, the upper Mississippi Valley region could still benefit from the advantages of long-haul, low cost water transportation. But once more a major advance in the river's development was necessary to keep up with modern concepts of inland navigation. This new goal, a nine-foot channel, was to become a reality during the following decade when the locks and dams now on the river were built. The story of the Mississippi thus entered a new era.

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APPENDIX

TABLE I

[illegible]

Showing the importance of states bordering upon the Upper Mississippi River, in 1900:

	Rank Pop.	Population.	Number of Manufacturing Establishments.	Capital Invested.	Number of Employes, Including Salaried Officials, Clerks.	Total Wages Paid, Including Salaries.	Cost of Materials Used.	Gross Value of Manufacturing Products.	Rank in Value Products.
United States.		75,994,575	512,726	$9,874,664,087	6,291,885	$2,735,110 612	$7,360,954,597	$13,010,036,652	
Illinois	3	4,821,550	38,360	776,829,598	480,644	234,848,426	739,754,414	$ 1,259,730,168	3
Missouri	5	3,106,665	19,754	249,888,581	169,534	75,289,034	214,988,018	385,492,784	7
Iowa.....	10	2,231,853	14,819	102,733,103	80,836	28,417,797	101,170,357	164,617,877	17
Minnesota ...	19	1,751,394	11,114	165,832,246	96,806	42,039,249	173,425,615	262,655,881	13
Wisconsin ...	13	2,069,042	16,187	330,568,779	170,083	60,015,980	208,838,167	360,818,942	9
Percentage of the U. S.		13,980,504 18%	99,234 19%	$1,625,852,307 16%	997,902 16%	$ 449,610,486 16%	$1,438,167,571 19%	$ 2,433,315,652 18%	

TABLE II

FURTHER STATISTICAL DATA OF STATES BORDERING UPON THE UPPER MISSISSIPPI RIVER, IN 1900

Land Area.

Land area of the United States		2,970,230 Square Miles.
	Sq. Mls.	
Illinois	56,000	
Iowa	55,475	
Missouri	68,735	
Minnesota	79,205	
Wisconsin	54,450	313,865

Percentage of Continental United States, 10.57%

Gross Value of Agricultural Products.

In 1900.

Rank.			
	In the United States		$4,717,069,973
1	Iowa	$365,411,528	
2	Illinois	345,649,611	
6	Missouri	219,296,970	
11	Minnesota	161,217,304	
12	Wisconsin	157,445,713	1,249,021,126

Percentage of entire United States, 26.5%

Annual Production of Wheat.

Bushels.

	1900.	1901.	1902.
In the United States	522,229,505	748,460,218	670,063,008
Minnesota	51,509,252	80,102,627	79,752,404
Illinois	17,982,068	30,052,053	32,601,932
Iowa	21,798,223	21,048,101	14,869,245
Missouri	18,846,713	31,137,097	56,266,494
Wisconsin	13,166,599	7,576,874	9,655,094
	123,302,855	169,916,752	193,145,169
Percentage of entire United States.	23.6%	23%	28.8%

Annual Production of Corn in 1899.

	Acres.	Bushels.	Value.
In the Uuited States	94,913,073	2,666,324,370	$828,192,388
Illinois	10,266,335	398,149,140	115,075,901
Iowa	9,804,076	383,453,190	97,297,707
Minnesota	1,441,580	47,256,920	11,337,105
Missouri	7,423,683	208,844,870	61,246,305
Wisconsin	1,497,474	53,309,810	15,905,822
	30,433,148	1,091,013,930	300,862,840
Percentage of entire United States.	32%	41%	36.3%

TABLE III

River and Harbor Appropriations

United States

Average annual appropriations

1820-1830	$353,000
1830-1840	817,000
1840-1850	137,000
1850-1860	331,000
1860-1870	1,306,000
1870-1880	6,260,000
1880-1890	9,487,000
1890-1902	19,659,000
Average, twenty years	14,000,000
Average, last ten years	19,250,000
Total to 1906	470,000,000

Other Countries

Waterways Expenditures

Holland	$1,500,000,000
France	1,120,000,000
Austria since 1848	100,000,000
Belgium since 1875	80,000,000
Hamburg, Ger., Harbor	75,000,000
Liverpool, Eng., Harbor	200,000,000
New Castle, Eng., Harbor	27,000,000
Marseilles, Fr., Harbor	24,000,000
Harve, Fr., Harbor	35,000,000
Rotterdam, Hol. Harbor	9,000,000
Total	3,170,000,000

TABLE IV

Freight Rates Showing Comparative Basis Between Points Having Water Competition and Inland Points Which do not Obtain the Benefit of Water Rates.

From	To	Miles.	Route.	CLASSES.				
				1	2	3	4	5
St. Louis,	St. Paul, Minn.	573	Rail	$ 0.63	$ .52½	$ .42	$ .26	$ .21
St. Louis,	St. Paul, Minn.	729	Boat	.40	.34	.27	.17	.14
St. Louis,	Oklahoma City, O. T.	543	Rail	1.30	1.09	.97	.84	.67
St. Louis	Dubuque, Iowa	340	Rail	.45	.37	.29	.23	.18
St. Louis	Dubuque, Iowa	439	Boat	.33	.26	.20	.15	.10
St. Louis	Topeka, Kas.	347	Rail	.89	.69	.54	.42	.32
St. Louis	Quincy, Ill.	140	Rail	.32	.27	.21	.15	.10
St. Louis	Quincy, Ill.	161	Boat	.26	.22	.17	.12	.08
St. Louis	Moberly, Mo.	148	Rail	.50	.39	.29	.23	.18
St. Louis	Hannibal, Mo.	120	Rail	.30	.25	.19	.14	.09½
St. Louis	Hannibal, Mo.	141	Boat	.23	.18	.14	.10	.07
St. Louis	Mexico, Mo.	110	Rail	.43	.34½	.26	.21	.16
St. Louis	Burlington, Iowa	214	Rail	.44	.35	.26	.18	.12
St. Louis	Burlington, Iowa	249	Boat	.33	.26	.20	.13½	.09
Quincy, Ill.	Kansas City, Mo.	226	Rail	.60	.45	.35	.27	.22
St. Louis	Peoria, Ill.	165	Rail	.25	.20	.16	.12	.11
St. Louis	Poplar Bluff, Mo,	166	Rail	.52	.44	.36	.31	.26
St. Louis	Cape Girardeau, Mo.	131	Rail	.25	.20	.15	.12½	.12½
St. Louis	Salem, Mo.	127	Rail	.46	.39	.32	.28	.23
St. Louis	Memphis, Tenn.	305	Rail	.65	.50	.45	.35	.30
St. Louis	Hickory Valley, Tenn.	302	Rail	.96	.82	.67	.55	.45
St. Louis	New Orleans, La.	705	Rail	.90	.75	.65	.50	.40
St. Louis	Terrell, Texas	669	Rail	1.37	1.21	1.04	.96	.75
New York	Chicago,	913	Rail	.75	.65	.50	.35	.25
Chicago	New Orleans.	923	Rail	1.10	.90	.76	.58	.47
Chicago	Kansas City,	458	Rail	.80	.65	.45	.32	.27
New York	Chicago, (Lake and Rail)			.59	.51	.40	.29	.25