NAVIGATION OF THE TRINITY RIVER

A THESIS

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NAVIGATION OF THE TRINITY RIVER

A THESIS

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By

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CHAPTER I

BACKGROUND OF TRINITY NAVIGATION

The name Trinity, as applied to the river which traverses the state of Texas, according to Fray Juan Morfi, refers to the Holy Trinity, the union of three persons, the Father, the Son, and the Holy Ghost in one Godhead.[1] This statement is corroborated by Z. T. Fulmore and other writers on the history and geography of Texas. Baker states that Trinity means "Three in One," so called from the three forks of this river which unite to form the main stream.[2]

The Indian name of this river was Arkokisa, a corruption from Orquisaco, the name of an Indian tribe. La Salle called it the river of canoes because he had to procure canoes from the Indians to cross the swollen stream.[3]

The Spaniard Alonso de Leon, who gave the river the name Trinity, probably first crossed this stream in 1690. Having left a few men at San Antonio in 1689, he pushed on into Texas and established a temporary mission near the site of the present town of Trinidad. In 1691 Domingo Teran de los Rios, the governor of Coahuila, crossed the Trinity River on his journey into the northeastern part of Texas, where, with the assistance of Franciscan friars, he established missions as far north as the Red River.

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1 Fray Juan Morfi, History of Texas, 1673-1779, C. E. Castaneda, Editor, p. 73.

2 D. W. Baker, Texas Scrap Book, p. 22.

3 H. S. Thrall, History of Texas, pp. 55-56.

Although he knew that De Leon had named the Trinity, Teran called it Encarnation del Verbo. Espinosa, another Spanish explorer, named it San Juan Bautista, but Ramon, Rivera, Lafora, and Solis, all Spanish explorers, consistently called it the Trinity.[4]

The west fork of the Trinity River, the principal tributary above Dallas, has its source in Archer County, in north central Texas, and flows in a southeasterly direction for about 186 miles to its junction with the Elm Fork at Dallas to form the Trinity River proper. From this junction the stream meanders in a general southeasterly direction for approximately 506 miles, having a total fall of 1250 feet in that distance.[5]

The Trinity River watershed, which lies in the heart of Texas, is long and narrow with a maximum length of 360 miles, and a maximum width of 100 miles at the upper end. The total area of the watershed is approximately 17,635 square miles and embraces all or part of thirty-seven counties.[6]

The total population of the thirty-seven counties comprising the Trinity watershed was 1,550,432 in 1940, of which forty-six per cent was urban and fifty-three per cent rural. The total population density on the watershed was approximately two times the average for the state, while the urban and rural population densities were 2.1 and 2.3, respectively, times those for the state. The rural population gained

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4 Fray Juan Morfi, Op. Cit., pp. 73-74.

5 77th Congress, 1 session, House Document No. 403, October, 1941, pp. 21-22.

6 Ibid., p. 14.

rapidly between 1930 and 1940, while the urban population has increased at an average rate of more than forty per cent since 1910.[7]

The upper watershed of the Trinity includes portions of eleven counties. The density of the rural population there is about 19 per square mile. Fort Worth, the largest city, with a population of approximately 200,000, is an important distributing point, livestock market, and grain center.

The middle watershed includes parts of thirteen counties and is the most densely populated portion of the watershed. The rural population averages about 37.1 per square mile, while the total population has increased slightly since 1930. Dallas, the largest city, has a population of 294,734 and is an important banking and trading center.[8]

The lower portion of the Trinity watershed also contains parts of thirteen counties, but it is the least populous and the least developed portion of the watershed. The rural population averages 18.3 per square mile while the total population increased slightly between 1930 and 1940.

The Trinity River watershed is predominantly an agricultural area with 5,716,464 acres of crop land valued at more than $400,000,000. The principal crops produced are cotton, corn, wheat, rice, oats, potatoes, hay, and sorghums. Production of corn and cotton is general throughout the region, but the greater part is produced in the Blackland

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7 "Population by Counties, 1850-1940," Texas Almanac, 1941-1942, pp. 104-108.

8 Ibid., pp. 104-108.

Prairie area.[9]

The production of livestock is also important throughout the Trinity basin, the annual value of all livestock produced in this area amounting to more than twenty-two million dollars. The greatest numbers are produced in the northwestern part and in the extreme southern portions.[10]

Timber is an important resource of the Trinity watershed, three of the great timber belts of the state extending across this region. The principal species of commercial timber are shortleaf and loblolly pine, gum, ash, red oak, pin oak, post oak, hickory, cedar, and pecan. The major portion of the virgin pine and hardwood forests have been cut, but an excellent second-growth of shortleaf and loblolly pine has been reproduced.

Lumbering, at one time a major industry in the watershed, is now comparatively inactive because the second-growth timber has not yet reached marketability. The adoption of good forestry practices gives great promise for the future of this industry. Two of the great National Forests extend into this area.[11]

The number of oil fields in the watershed has increased rapidly since the discovery of the first oil at Corsicana in 1894. Twenty of the thirty-seven counties of this region now have producing fields. According to the Texas Almanac of 1941-1942, crude oil production from these fields amounted to approximately 45,604,827 barrels in 1940.[12]

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9 "Counties and Cities of Texas," Texas Almanac, 1941-1942, pp. 407-447.

10 77th Congress, 1 session, House Document, No. 403, p. 31.

11 Ibid., pp. 31-33.

12 "Texas Oil Production by Counties," Texas Almanac, 1941-1942, p. 203.

Bituminous coal of low grade was at one time mined near the town of Bridgeport in Wise County. The discovery of oil and gas in nearby fields killed this industry by providing an abundant supply of higher grade fuels.

There are large deposits of a fairly good grade of lignite in Van Zandt, Trinity, Walker, and Madison Counties. These beds vary in thickness up to a maximum of 15 feet, and many of them lie near the Trinity River. There are great possibilities for the successful use of lignite as fuel should oil and gas reserves dwindle.

There are vast iron ore deposits located in the East Texas iron ore region, which lies partly in the Trinity River watershed and extends to the north and east. Estimates made in 1934 indicate a total reserve of about 150,000,000 tons of workable iron. These deposits are, mainly, of low grade metallic content but can be mined very readily.[13]

As long as the production of pig iron from charcoal furnaces was profitable there was considerable production from the East Texas deposits, but since 1909 there has been no production because of the lack of a nearby supply of coal adaptable to the manufacture of coke. Early in 1941, however, construction was begun on a plant at Longview, designed to have a production of about thirty tons of sponge iron daily. Other iron mines are being opened near Daingerfield in Morris County.[14]

Most of the salt produced in Texas comes from the East Texas salt domes. A large salt plant, located at Palestine, Anderson County, has

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13 77th Congress, 1 session, House Document No. 403, pp. 33-35.

14 "Metallic Minerals," Texas Almanac, 1941-1942, pp. 235-236.

operated intermittently for the past few years, while one of the largest plants in the United States is located at Grand Saline. There are vast deposits of salt at both places which insure the continuation of this industry.

Grimes and Walker Counties have large deposits of fuller's earth. Riverside, located on the banks of the Trinity River in Walker County, is the principal source of this material. Bentonite, a filtering material, is also mined at Riverside.[15]

The Trinity watershed has a variety of clays and shales suitable for the manufacture of brick, pottery, and tile. The brick manufacturing towns of Palmer and Ferris, in Ellis County, supply most of the common brick used in Fort Worth and Dallas. Several companies manufacture pottery at Dallas and the production of cement is carried on to a great extent in that area.

There are large deposits of sulphur near the Trinity in the vicinity of Liberty in the Coastal Plains. These deposits are being extensively worked at the present time.

The Trinity River watershed is primarily an agricultural region; however, its large cities are important manufacturing centers. In 1940 there were 1,470 factories producing goods valued at more than $324,135,000. Dallas had 645 factories with production valued at $126,752,187, while Fort Worth had 264 with production valued at $89,157,809.[16]

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15 77th Congress, 1 session, House Document, No. 403, p. 35.

16 "Manufacturing in Texas," Texas Almanac, 1941-1942, pp. 251-253.

In 1940 the total amount of wholesale sales in Texas amounted to $2,050,548. Dallas had 1,043 wholesale establishments whose sales amounted to $475,454,000, while Fort Worth had 436 wholesale establishments with sales amounting to $148,386,000. The combined sales of these two cities amounted to thirty per cent of the total for the state.[17]

Dallas, the second largest city in Texas, ranks first in the State and in the Southwest in wholesale and retail sales, manufacturing, banking, and insurance. Among the leading cities of the whole United States it ranks fourteenth in wholesale trade, twenty-third in retail sales, third in millinery, second in wash-dress manufacturing, and fourth as an insurance center.[18]

Fort Worth ranks thirty-sixth among the cities of our nation in wholesale trade, and forty-fourth in retail sales. It is the fourth largest city in Texas and the largest grain and cattle market in the Southwest.[19]

When the Trinity River area is spoken of, people in general do not realize the importance of this region. Considering the vast resources and the enormous amount of business transacted in the Trinity watershed, it is safe to say that this is, indeed, the heart of the great State of Texas. The benefits of river navigation to this region are, therefore, readily apparent.

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17 "Wholesale Trade," Texas Almanac, 1941-1942, pp. 251-253.

18 77th Congress, 1 session, House Document, No. 403, p. 38.

19 Ibid., p. 38.

CHAPTER II

EARLY EFFORTS TO NAVIGATE THE TRINITY RIVER

Ever since the days when the Indians paddled silent canoes between its banks, the Trinity River has played an important part in the lives of the people of Texas. Long before the railroad came to the section traversed by that stream, hunters and settlers floated their crude boats on its waters and even steamboats occasionally penetrated as far as the frontier town of Dallas.

Morfi, an early explorer, gave a vivid description of the Trinity River, and was the first to speak of the possibilities of navigating that stream. He said,[1]

> The river of the Holy Trinity has its source to the northwest, above the Pueblo of San Theodoro of the Taovayases (whose land it waters). It rises in three springs which come together in a large bed that permits it to receive the numerous creeks that enrich it. Its bottom is made up, in several places, of flint stones or little pebbles. It is navigable the greater part of its course, which is one hundred and fifty leagues to the sea, where it empties to the east. It is subject to frequent and terrific floods during the rainy season or the melting of the snow. It is not difficult to avoid their consequencies by selecting a high place along its banks, but the indolence of the settlers of Bucareli was responsible for their being surprised by a flood that destroyed their wretched huts. The bar at the mouth of the river, where it enters the sea, though it does not offer facilities for a good port, permits the entrance of two-masted ships.

Although the Spaniards spoke of the possibilities of navigating the Trinity, they made no attempts to use the stream for that purpose.

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1 Fray Juan Morfi, History of Texas, 1673-1779, C. E. Castaneda, Editor, pp. 73-74.

In fact, throughout the history of Spanish effort in Texas, the Trinity River served as a barrier to their progress. The experience of Marquis San Miguel de Aguayo shows this clearly.

In July, 1721, Aguayo and his men, who had been sent from Mexico into East Texas to strengthen the missions of that province, reached the Trinity River, which, evidently, was nearing flood stage. It took them sixteen days to cross the stream. The actual crossing was accomplished by means of a canoe which the missionaries had constructed in their retreat in 1719, and hidden in a creek near by.

According to the account given by Morfi, Aguayo at first asked the Indians to construct a raft of dry wood and canes. This effort proved fruitless. Another much heavier boat was built by the soldiers, but it proved too awkward to manage and was also discarded. Then began a search for the canoe which lasted two days. When it was finally found several teams of oxen and a carpenter with a group of men were sent to get it. After four days of hard labor, the old canoe was brought to the camp, and men and baggage were taken safely over the river.[2]

The Spaniards were almost entirely ignorant of the geography of the lower Trinity and the adjacent country until 1746. The authorities were stirred to action by a letter written in 1745 by Don Joaquin de Orobio Bazterra, captain of the presidio of Bahia del Espiritu Santo, telling of reported French activity on the lower Trinity River.

The viceroy ordered Captain Orobio to make an investigation of French activity. After several attempts to get into the lower Trinity

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2 Ibid., p. 203.

region had resulted in failure, Orobio decided to take the Adaes road from Goliad to the crossing of the Trinity, a hundred miles or more above the mouth, and descend to the coast from that point. Miguel Olivares was sent to investigate the possibilities of the proposed expedition by water and reported that the river was obstructed and that suitable boats could not be built.[3]

Orobio changed his plans and continued his expedition into the lower Trinity region by land, where he was informed by the natives that men from near the Mississippi River had been coming to trade with them for the past six years. Some of these men had come by land, but many others had come in small craft by way of the Trinity River.

In September, 1772, the two Spanish presidios and the four East Texas missions still in operation were ordered discontinued by the Spanish government, and the settlers removed to San Antonio. The population about Adaes was content in their homes and did not wish to move.

Antonio Gil Ybarbo, their leader, obtained permission from the Spanish authorities to establish a settlement on the right bank of the Trinity River. The place has been identified with the crossing known as Robbins Ferry, near the old town of Randolph, in Madison County, and was known to the Spanish as Bucareli.[4]

The reasons given by Baron de Riperda, then governor of Texas, for the location of the new settlement were apparently unselfish. Other people maintained that the selection was determined by the personal

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3 Herbert Eugene Bolton, Texas in the Middle Eighteenth Century, pp. 327-329.

4 Ibid., p. 406.

interests of the governor and Gil Ybarbo in the French and Indian trade. Don Hugo Oconor, inspector commandante, reported that the settlement had been located in a place that would enable the leaders to engage in illicit trade, since the Trinity River would facilitate navigation to Opelusas and the neighborhood of New Orleans. Both Ybarbo and Riperda had been accused of taking part in a rich illegal trade with the French before leaving the Nacogdoches region.[5]

French pressure on the Spanish was removed at the close of the French and Indian War, and Spanish activities in the eastern part of Texas declined for the next few decades. In 1821 the Anglo-American colonization of Texas began and these new-comers, who through settlement and revolution took possession of Texas, began to develop transportation facilities.

The first steamboat to navigate the Trinity River for the purpose of trade was the Scioto Belle, which made her initial trip in 1836. Another boat, the Correro, arrived in Galveston on April 18, 1839, and reported that navigation was easy as far as Carolina Landing, in present Walker County.

According to one statement, a steamboat, the Branch T. Archer, navigated the Trinity to a distance of three hundred and fifty miles. That trip was made sometime prior to May 28, 1838, and under the most unfavorable circumstances. Citizens living along the Trinity River agreed to donate certain property and varying amounts of money to the owner of the vessel, provided he would agree to make regular trips from

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5 Ibid., pp. 416-417.

Galveston as far as the town of Cincinnati. The owners of the Branch T. Archer, John E. Ross and, later, John Huffman, were to endeavor to remove all obstructions to navigation as soon as sufficient encouragement was given by the government and the citizens of the Trinity region.[6]

In March of 1840, Howell, Meyers and Company dispatched the steamer Trinity to Alabama ten miles southwest of the present town of Crockett, in Houston County. This boat returned a few weeks later and it was reported "that navigation was uninterrupted and that the boat could have gone much farther if it had been so desired." The Trinity made another trip up the river in June, but was caught on a shoal above Alabama and could not get off for several months.

Another steamboat, the Friend, was engaged in the Trinity River trade in 1840. There is, however, no record of how far up the river she went.[7]

According to reports made by the captains and crews of these ships, there was great activity in the upper Trinity River country. Settlement was rapid, and some neighborhoods were becoming rather densely populated for that time. Many of the new settlers were substantial farmers who planned to develop cotton plantations.

Up to 1840 the people of the lower Trinity were giving little attention to navigation on the upper reaches of the river. In 1841, John Neely Bryan built a cabin on the banks of the Trinity and formed

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6 Document in private collection of J. L. Clark, Huntsville, Texas.

7 S. H. Acheson and Wayne Gard, "Trinity Navigation Movement Reaches Its Peak," The Dallas News, October 1, 1935, part 7, p. 3.

the nucleus of the present city of Dallas. At that time the nearest navigable point to this settlement was Jefferson in East Texas, on a tributary of the Red River, which was about 170 miles away. It required nearly two months to transport goods from Jefferson to Dallas by wagon train, and a much longer time from Galveston. It was quite natural that the citizens living around Dallas should begin to think of developing the navigation of the Trinity in order to solve their transportation problem.[8]

Sometime prior to 1842, a steamer, the Ellen Franklin, returned to Galveston, after having made a successful voyage up the Trinity for a distance of four or five hundred miles. The records are incomplete, but it is possible that the Ellen Franklin passed the site of the present city of Dallas. Captain Franklin, the owner of the ship, reported that the navigation of the Trinity was perfectly practicable to within a distance of about sixty or seventy miles of the Red River.

The voyage of Captain Franklin was made about the time that the upper part of the Trinity region, above the city of Dallas, was granted to a group of American and English speculators. Another company of English ownership was also interested in the colonization movement. A large number of settlers had been introduced, and the scheme had resulted in a greater development of the region. The intention of these companies was to use iron steamers with light draught in the navigation of the Trinity.[9]

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8 E. H. Brown, Trinity River Canalization, pp. 37-38.

9 Mrs. Houstoun, Texas and the Gulf of Mexico, p. 183.

In 1847 Emerson and Lufkin, Galveston merchants, built the Thomas F. McKinney to further develop the commerce of the Trinity River region. This boat was constructed in Galveston at a cost of $25,000. She made several trips up and down the river, and on one of them her cargo included 1,000 bales of cotton, some deer skins, and a few Indian scalps. The Emerson and Lufkin enterprise did not prove successful, and was later given up.[10]

In the 1850's steamboats occasionally ascended the Trinity River for several hundred miles. Due to rapid currents, waters of shallow depth, and other dangers attending river navigation, these adventures were not altogether profitable. Nevertheless, for a number of years such river ports as Sebastopol, in Trinity County, Swartwout in San Jacinto County, and Cincinnati in Walker County, were thriving towns.

One of the difficulties of river navigation was encountered by the captain of a boat from Galveston in 1851 or 1852 on a trip up the Trinity. The journey was made with comparative ease as far as Cincinnati. At that point it was discovered that the flood waters which had aided navigation were being supplied by the Bedias Creek from more or less local rains. The boat was forced to tie up at Cincinnati, where, according to an account of one of the passengers bound for Palestine, the captain gave his passengers and crew a Christmas dinner of barbecued squirrels taken from the nearby forests. The journey was delayed two weeks. Some of the people aboard went to Huntsville, fourteen miles

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10 S. H. Acheson and Wayne Gard, Op. Cit.

away, and to other communities, to await a "rise" in the river.[11]

In 1854 the Mary Clifton, which was large enough to carry 255 bales of cotton, made several trips up and down the river. This boat, on account of her size, had to wait on several occasions for more water. There were smaller boats such as the Kate, the Early Bird, the Vesta, the William R. Douglas, and the Belle of Texas which experienced little difficulty.

Between 1870 and 1880 the volume of the Trinity River trade grew rapidly. A report in The Galveston Daily News, March 3, 1870, shows the nature of this trade.[12]

> A citizen of Dallas, just returned from a journey through the Trinity Valley Counties, informs us that there is still a large amount of cotton in that valley waiting for shipment to this city, but that there is now no prospect of a rise.
>
> The decline in prices, however, and the continued low stage of water in the Trinity River will cause the cotton on the plantations to come forward slowly, and a dull season after this month is anticipated by many. A large portion of the cotton to come forward is on the Trinity River and forage for teams is scarce and high, causing rates for hauling to the depots to rule exhorbitantly high, so that a large portion of the cotton will have to wait a turn in prices, or a spring rise in the river.

These forebodings were of short duration, however, for according to a commercial statement in the same paper of March 25, 1870, this situation had evidently changed by that time, as two heavily laden steamers had left for the Trinity and another could have been filled with goods

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11 Incident related by Randolph Clark who, as a boy of eight years, was en route with his father, J. A. Clark, and other members of the family from Galveston to Palestine. The Clarks continued the journey to Palestine overland after a sojourn of several weeks in Huntsville.

12 "Trinity River News", The Galveston Daily News, March 3, 1870, p. 8.

at once.

In the same month the steamer Ida Rees was loading at Brookfield's Bluff in Houston County. Captain Stubblefield was shot while at this place and the ship left on the twenty-fourth under the command of Captain John T. Smith. There were at that time seven steamers and twenty "flats" on the Trinity River, capable of taking out between 7,000 and 8,000 bales of cotton. The steamers included, besides the Ida Rees, the Justice, the Early Bird, the Mollie Hambleton, the Cleona, the Black Cloud, and the Indian.

Many of the boats which brought cotton and other produce to Galveston during the period of high water unloaded at Kuhn's Wharf. In later years some of the steamers brought as many as 1,000 or 1,200 bales of cotton, and with the cotton came the planters and their families to see the city, buy supplies, or settle their accounts with local merchants.

At least a week was required to make a return trip up the Trinity to Magnolia, a settlement in the vicinity of the present city of Palestine, where the flat-boats were met and cargoes exchanged. In order to make as many trips as possible during the short season that the boats could operate, each craft had two crews so that they could navigate day and night. The voyage down stream was more dangerous than going up the river because of the many sand bars and snags which loaded boats encountered. Food enroute was sometimes difficult, but keeping fresh meat for the table was no problem, as wild game was plentiful all along the river. A good shot could keep the crew well supplied with more than it could eat.[13]

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13 "Galveston Focal Point for States Ante-Bellum Transportation System," The Galveston News, April 11, 1942, section 1, pp. 18-19.

To this point attention has been directed chiefly to the early activities of the Spanish and the Anglo-Americans to utilize the Trinity River for commercial purposes. It was not until 1833, however, that the first law in regard to the navigation of this stream was passed. That was a Mexican law, enacted during the days when Texas was joined to the Mexican state of Coahuila. By its terms the Congress of the State of Coahuila-Texas granted to Francisco Madero the exclusive privilege of introducing vessels propelled by steam or horse-power, sails or oars, upon the Trinity River. This privilege was to extend for a period of eighteen years provided Madero made the river navigable at his own expense.

The boats used by Madero on the Trinity were to be exempt from all new taxes that might be passed, but he was required to pay all taxes that were due at the time the decree went into effect. It was also stipulated that if the empressario, or his representatives, did not begin the navigation of the river within three years from the date of the law's enactment, he was to forfeit all rights granted by the law.[14]

Madero did nothing toward navigating the Trinity; therefore, no tangible good resulted from this decree.

The first survey of the Trinity River for the purpose of passenger travel was in the spring of 1843. Colonel Jacob Elliott with a small company of men inspected the course of the Trinity to determine whether it could be navigated by steamboats above Magnolia. Colonel Elliott made a trip from Three Forks to Magnolia in five days, traveling in a

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14 N. H. P. Gammel, The Laws of Texas, vol. I, p. 209.

canoe dug out of a large cottonwood tree. He reported that if two or three small "rafts" and a few leaning trees were removed, steamboats could ascend with little difficulty to a distance of three hundred miles above Magnolia.

Colonel Elliott was connected with the colonization movements on the upper Trinity. According to reports, he intended to return to New York and recommend that the colonists who were preparing to emigrate to the settlements in the Cross Timbers of East Texas go by way of Galveston and ascend the Trinity in steamboats. The original plan had been to go by way of the Red River.

Some efforts to clear the Trinity River near Dallas were made in June, 1843. Colonel John Neely Bryan and others had set fire to the main "raft" which obstructed navigation, in the hopes that it could be reduced by fire so that the next rains would remove it. If this could be accomplished, the river would be open to navigation to a point above Dallas, they reasoned, as a large portion of the smaller rafts had already been removed by rising waters.

Galveston and Houston were both interested in securing the trade of the colonists above the old San Antonio road, which crossed the Trinity at Robbins Ferry. A large share of this trade was going to St. Louis by an overland route, and to New Orleans by way of the Red River. Galveston and Houston advocated the improvement of the Trinity and the opening of a road from Three Forks to Fort Houston (Palestine) to carry on the trade when the waters of the Trinity were too low to allow navigation above that point. Magnolia was the head of navigation in 1843.

This community which once gave promise of becoming a thriving port, like many other towns along the river, joined the host of ghost towns of Texas when navigation proved impracticable.

Since they had no economical means for transporting their cotton or wheat to market, the people of Dallas continued their interest in developing the navigation of the Trinity. In 1849, they sent John Neely Bryan, John M. Crockett, and the Reverend James A. Smith to a convention which was held at Huntsville. The purpose of this convention was to devise ways and means of furthering the improvement of the navigation of the Trinity. No immediate benefits resulted from this convention, however, other than to stimulate the agitation of the project.

In the spring of 1851 James A. Smith and his associates planted the first cotton seed in Dallas County, and the following fall Mr. Smith built a gin. At this time ox teams and wagons continued to be the principal means of getting produce to the markets. The journey to Jefferson, Houston, Galveston, or San Antonio by such means was slow and expensive. The enterprizing citizens of Dallas County became more determined to convey their cotton to Galveston by way of the Trinity River.

The first attempt by Dallas citizens to use the Trinity River for commercial purposes came in 1852, when James A. Smith constructed a flat boat to carry his cotton downstream. The boat was made by sawing gunwales out of cottonwood trees with a whipsaw. This craft had no engine but was propelled by oars and poles.

The boat was named the Dallas, and on March 2, 1852, with A. C. Haught as captain, this crude vessel weighed anchor bound for Porter's

Bluff in Navarro County, near Corsicana. Her cargo consisted of twenty-two bales of cotton, some cow hides and some buffalo hides. Four months after her departure she arrived at Porter's Bluff where she was compelled to tie up, since the river was getting too low to proceed farther. The cargo had to be unloaded and transported the remainder of the journey by wagons. In later efforts to make use of the Dallas the craft struck a snag and was sunk. The initial success of this adventure, however, spurred the people on the upper Trinity to greater effort. The experience of the Dallas seemed to prove that by clearing the river of snags and other obstructions, it could easily be made navigable.[15]

Previous to this period efforts had been made from time to time to interest the federal government in projects on the Trinity River. It was not until 1852, however, that Congress became sufficiently interested to make an appropriation of three thousand dollars for a survey of the Trinity to determine the feasibility of making it navigable.

The first examination by government engineers was made under the direction of Lieutenant H. C. Whiting. In his report to Jefferson Davis, Secretary of War during the administration of Franklin Pierce, Whiting said that the Trinity River was the deepest and least obstructed river in Texas. He also reported that three steamboats were, at that time, returning from a point above Dallas, and that during high water navigation was feasible for about six hundred miles above the mouth of the river. According to the report, the period of high water lasted for

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15 E. H. Brown, Trinity River Canalization, p. 35.

about six months each year, and the river had been known to remain at this stage for eighteen consecutive mohths.[16]

Even though the report was favorable, no further action was taken by Congress.

In 1856 the Texas Legislature took a hand in the improvement of the Trinity River. In August of that year a law was passed appropriating $300,000 for the improvement of navigable rivers, lakes, and bays. Counties were also given the right to raise one-fourth of the money by subscription to aid in such improvements. A contract to remove the bar at the mouth of the Trinity, at a cost of $15,120, was given by the State to D. Bradbury in April, 1857. The time for the completion of this work was extended by a subsequent act passed in 1858.[17]

In 1866 the waters of the Trinity rose to a higher level than usual, and influenced the Texas Legislature to charter in that year the Trinity River Slack Water Navigation Company. This company was authorized to have capital stock of one million dollars, with the privilege of increasing it to two million dollars if it was deemed necessary.

The Trinity River Slack Water Company was empowered to establish permanent daily navigation by means of locks and dams to any point between Liberty and Dallas. For each mile of river made navigable the state was to donate four sections of land, and reserve the right to collect tolls from passing vessels. If certain locks and dams were not

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16 64th Congress, Hearings on the Subject of the Improvement of Trinity River, Texas, p. 5.

17 H. N. P. Gammel, The Laws of Texas, vol. IV, pp. 46-47.

built within three years the charter was to be forfeited.[18]

The attempt of this company to make the Trinity River navigable was foredoomed to failure by the rise of railroad competition. The Houston and Texas Central Railroad Company began to extend its lines from Bryan toward Dallas, and the Missouri Kansas and Texas Railroad Company also began to build through North Texas. Although these lines did not reach Dallas until about 1872, the extensions caused the sponsors of the Trinity River Slack Water Company to give up the project before anything was done.

The people of Dallas never ceased their efforts to induce a boat to come from Galveston to Dallas, and thus demonstrate the practicability of navigating the river. Their efforts were rewarded in 1868 when Captain J. M. McGarvey of the Job Boat No. I undertook the voyage. This boat which was 66 x 20 feet of twenty-six tons capacity, landed in Dallas sometime in May, 1868, and Captain McGarvey was paid five hundred dollars for his trouble.

The successful voyage of the Job Boat No. I was looked upon as indisputable proof that the Trinity could be navigated. Meetings were held, resolutions adopted, and all the people living along the river were invited to assist in establishing a regular line of steamboats.[19]

With the money raised by contributions made by business men and citizens, a steamboat named the Sallie Haynes was constructed in Dallas,

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18 Ibid., vol. V, p. 162.

19 John H. Cochran, Dallas County, pp. 123-125.

and on December 17, 1868, it was launched. This boat, 87 x 20 feet, was named in honor of the daughter of Dr. J. W. Haynes, a prominent merchant and real estate owner of Dallas. Early in 1869 the Sallie Haynes started her first trip to Galveston and on April 18, reached Spivey's Ferry near Trinidad. Here she was met by the Early Bird which was coming upstream from Galveston. As the river was too narrow for the ships to pass each other, they exchanged cargoes. The Sallie Haynes made several trips between Dallas and Magnolia before she struck a snag and sank four miles below Dallas.[20]

By 1872 Congress was induced to appropriate $3,500 for a survey of the Trinity from its mouth to Magnolia, a distance of 320 miles. As a result of a survey ordered in 1872, the improvement of the river was limited to that portion lying between Liberty and the mouth of the river, a distance of thirty-nine miles. The improvement consisted of the removal of snags and the dredging of a channel 80 feet wide by 6 feet deep across the mouth. The estimated cost was $21,581.

The first attempt to secure a federal appropriation for the widening, deepening, and clearing of the channel was made by the people of Dallas in 1881. A great public meeting was held and approximately $7,500 was subscribed for the formation of a local company to promote the navigation of the Trinity River. Charles N. Eley, a Galveston man, informed the meeting that he represented thirty-five steamboats which had operated on the lower part of the Trinity between 1865 and 1872.

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20 Ibid., pp. 123-125.

The citizens of Dallas continued their efforts during the next few years and in July, 1891, the Trinity River Navigation Company was organized for the purpose of bringing about the navigation of the river through federal assistance. Their intentions were to build dams, construct locks, and remove snags and "rafts" from the river.

Although the Rivers and Harbors Act of June 10, 1872, authorized a survey of the Trinity River, it was not until January 26, 1891, that a report was submitted by Major Charles J. Allen, an army engineer, which was unfavorable to the improvement of the river at federal expense. In a report of his survey Major Allen stated that in 1870-1871 the number of steamboats engaged in the Trinity River trade was fourteen, and that in 1872 the number had increased to seventeen. The shipments of cotton which in 1870 amounted to 23,319 bales had in 1872 been reduced to 14,244 bales, and it was expected that the year of 1873 would show a still greater decrease. This decrease was attributed mostly, if not entirely, to the completion of the International and Great Northern Railroad, which crossed the Trinity at Riverside, in Walker County.

Major Allen stated that from all the information he could obtain, it appeared that the Trinity River between Magnolia and Dallas was too full of obstructions and their removal too costly for the government to attempt the work. This was also true, he said, of that part of the river between Magnolia and the mouth. According to his views there was no business, present or prospective, that would warrant even the cost

of further survey or examination.[21]

In another attempt to further prove the feasibility of navigating the upper Trinity, a steamboat, the Dallas, was launched in 1891. On December 17 that craft completed her trial trip to Dallas from a point six miles below the city, carrying mostly cord wood.

In February, 1892, the Trinity River Navigation Company sent a party of men down the river to inspect conditions. In their report to the company, it was stated that the Trinity could be made a navigable stream for one-half of the year by the removal of drifts and snags, and that year round navigation could be promoted by the addition of a few locks, perhaps not more than five for the entire river.

Since the federal government had refused to give aid, the Trinity River Navigation Company had determined to do what they could to improve navigation. By September, 1892, a total of $62,500 had been subscribed by Dallas citizens to promote this work. In November, 1892, the company launched its first snag boat in the presence of a cheering throng.

In May, 1893, the H. A. Harvey Jr., a steamboat purchased in Mermenteau, Louisiana, arrived in Dallas. The people turned out for the greatest of all Trinity River celebrations, and this gave new impetus to the work of the Trinity River Navigation Company. The sale of stocks in the company continued at a remarkably rapid pace.

Commodore W. S. Duncan and Thomas W. Griffith were placed in

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21 51st Congress, 2 session, House Executive Document 275, p. 1,936.

charge of the river improvement work. The company authorized them to start the construction of the necessary locks and dams immediately. In November, 1893, an attempt was made to get help from the Texas Legislature, but all efforts were useless.

A temporary dam was constructed at McCommas Bluff, thirteen miles below the city of Dallas. The back-water caused by this dam enabled the H. A. Harvey Jr. and the snag boat to operate in the vicinity of Dallas for two years. In 1894 the Harvey made a second trip to Dallas without any trouble, and the company announced that federal engineers were planning to make another survey shortly.

CHAPTER III

THE PERIOD OF LOCKS AND DAMS, 1899-1921

In February, 1899, a Rivers and Harbors Act was passed by Congress providing $7,000 for a preliminary survey of the Trinity River. The river was divided into four sections and separate estimates were to be made for the improvement of each section. Government engineers were required to prepare separate estimates to determine the cost of making this stream navigable by the use of locks and dams to a depth of four, five, and six feet, respectively.

In accordance with the provisions of the Rivers and Harbors Act of 1899, Lieutenant Colonel C. S. Richie was appointed to make the survey. Since Congress had provided only $7,000 for the work, Colonel Richie was unable to make a detailed examination of the river. He made a report in December, 1899, which contained separate estimates of the costs of making the Trinity River navigable to depths of four, five, and six feet, respectively. Colonel Richie estimated that it would require the construction of thirty-seven locks and dams between the city of Dallas and the Gulf of Mexico to give the river six foot navigation as far as Dallas. The cost of the project was estimated at $4,650,000.

Colonel Richie advanced two reasons to justify his recommendation that the Federal Government undertake the project. In the first place, he said, the Trinity River was a natural canal extending five hundred miles through a fertile country which was rapidly being filled with people.

In the second place, Dallas, which would grow into a great city if it had the proper transportation facilities, was located on the headwaters of this stream.[1]

In his report to the Chief of Engineers, Colonel Henry M. Robert, Division Engineer, endorsed the report of Colonel Richie. He stated: "Assuming that it will effect a reduction in freight rates equal to one-tenth of what is claimed by the Dallas Commercial Club, the entire cost of the work, even for six foot navigation, would be saved in less than six years."

"In my opinion," continued Colonel Robert, "the Trinity River is worthy of improvement by the General Government to the extent of providing a six foot navigation from its mouth to Dallas."[2]

Although the Trinity River project had been recommended by government engineers in 1899, Congress took no action until June 13, 1902. At that time a new river and harbor act was passed appropriating $125,000 for immediate use and authorizing the Secretary of War to enter into additional contracts for materials and work to prosecute the project, not to exceed $275,000, the same to be paid for as appropriations were made. This money was to be used to construct locks and dams upon the river between the mouth and section one, the lower limit of which was forty-nine miles below Dallas. Fifty thousand dollars of the sum to be expended was earmarked to procure and operate snag boats, and to clear the river of

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1 62nd Congress, 3 session, Hearings Before the Committee on Commerce, pp. 3-33.

2 58th Congress, 1 session, Further Improvement of the Trinity River in Texas, pp. 20-21.

all obstructions as far as Dallas.

The project adopted in part by this legislation contemplated a total expenditure of $4,650,000 on the Trinity River. Five locks and dams were projected in section one at a total estimated cost of $625,000.[3]

According to the provisions of the Act of 1902, a Board of Engineers was appointed to determine the feasibility and advisability of expending the further sum of $350,000 on section one, in addition to the $50,000 above mentioned. This board submitted a preliminary report on October 31, 1902, in which it was stated that more information concerning gauge readings and detailed plans for locks and dams was needed before a final report could be intelligently made.

The District Engineer, who was ordered by the Board to procure the necessary information, retained the services of D. A. Watt as Assistant Engineer. Mr. Watt, who had extensive experience in lock and dam construction, made a thorough and exhaustive investigation of the matters of inquiry submitted by the Board.

The Board of Engineers met at Galveston on November 19, 1903, and, after a session of two days, adjourned to New Orleans where their discussions were continued and a report formulated. The majority of the Board was of the opinion that it would not be possible to provide eight months navigation annually upon section one of the Trinity River with the expenditure of $625,000. The majority believed that section one of this stream could be made navigable at a total cost of $918,000,

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3 Ibid., pp. 3-4.

and would require six locks and dams instead of five. They recommended that the project be undertaken "because of the commercial situation in North Texas".[4]

In March, 1904, Senator Charles A. Culberson sponsored a bill which permitted the Secretary of War to change the plans for the construction of the locks and dams in order to give them a greater capacity and a greater lift of water. This would enable more vessels to pass through the locks in a given time.

The year of 1904 was one of the most active periods in the history of the Trinity River. The steamboat, Frank P. Holland, intended as a supply ship for the use of the government engineers in their survey of the river, made its initial trip from what was known as the "long bridge," above Dallas, to the foot of Commerce Street, a distance of about eight miles. This boat was a stern-wheel steamboat with a hull 59 feet long and drew about twelve feet of water. The Frank P. Holland continued downstream to a point seventy-two miles below the city of Dallas.

Another boat, the W. C. Wolf, which was to be used as a snag boat, was on the upper Trinity at this time assisting in preparations for the actual work to follow. Two other snag boats were under construction at Texas City, one to be used on the Trinity and the other on the Brazos.

Captain Edgar Jadwin, the District Engineer at Galveston, was placed in charge of government operations. By March, 1904, 170 men were employed by the government in removing snags and "rafts," and clearing

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4 58th Congress, 2 session, House Document No. 118, pp. 2,021-2,026.

the banks of over-hanging timber. By the end of the year the channel had been cleared of all obstructions to a point eighty miles below Dallas. This was done at a cost of $75,000.

A second appropriation of $500,000 was made by Congress in 1904. At the same time the city of Dallas donated $66,000 for the construction of a dam across Parson's Slough, twenty-six miles below the city.[5]

On March 20, 1906, it was announced by government engineers that the drawings for Lock and Dam No. 6 were complete. Bids were advertised, contracts let, and work was begun on July 19. Three boats which were to be used in connection with the work, the Katie Putman, the Nellie Maurine, and the Charles T. Gray, were launched.

During the year of 1907, as the work on the locks and dams progressed, there were numerous surveys and inspections by government engineers and officials. All of them promised quick navigation of section one.

In 1908 a new problem was encountered. The bridges across the Trinity River in the vicinity of Dallas were too low to permit certain types of vessels to pass. Several surveys were made in this connection, but, since Congress had not appropriated any money for raising bridges, nothing was done. Nevertheless, Commodore Duncan, the representative of the Trinity River Navigation Company, promised actual navigation of section one as a Christmas present to Dallas.

The Trinity River project had been adopted in part by the Rivers and Harbors Acts of June 13, 1902, March 3, 1905, March 2, 1907, June 25,

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5 E. H. Brown, Trinity River Canalization, pp. 46-47.

1910, July 25, 1912, March 4, 1913, and July 27, 1916. Each act authorized the construction of certain named locks and dams. The Act of July 12, 1912, provided for a six foot channel from Galveston to Dallas and for the location of two additional locks and dams in section one of the river.[6]

Work on the locks and dams throughout the length of the Trinity progressed during the next few years. Nine locks and dams had been completed by 1916. The first, about nine miles below Dallas, was completed in 1909 at a cost of $155,000. Six more, between Dallas and a point fifty miles below the city, and two about midway between Dallas and Galveston, in Houston and Trinity Counties, were either wholly or partially completed at an average cost of approximately $200,000.

In 1909 C. A. Keating, President of the Trinity River Navigation Company, resigned and the company gradually relaxed its efforts to secure the navigation of the river. By that time the company had spent $162,343.45 upon the project.

In 1914 the railroads running into Dallas offered to give the city a union station provided they would surrender Broadway Street which ran parallel to the river bank, and give up other cross streets for the location of the station and the network of tracks. Thus by occupying the entire river front, the railroad interest hoped that the navigation of the Trinity River was killed.

In the same year, however, a new Trinity River Navigation Company was formed with John W. Philips, C. W. Hobson, and J. C. Duke as the

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6 77th Congress, 1 session, House Document No. 403, p. 100.

principal promoters. They made plans to operate steamboats over the fifty miles of the river which had been made navigable by the locks and dams already completed. Unfortunately for the promoters, this enterprise met with little success.

By 1916 the Federal Government had spent over $2,000,000 in its effort to make the Trinity River navigable, while the people of Dallas had spent more than $1,500,000. Dallas had contributed $66,000 for building a dam, and $20,000 for lock and dam sites which the government required them to provide. Beginning in 1909 the city began rebuilding bridges to meet government demands, which resulted in an expenditure of $800,000. The city spent another $700,000 for the diversion of sewage from the waters of the Trinity.

Through its Chamber of Commerce and Manufacturer's Association, Dallas appointed a Trinity River Committee with Frank P. Holland as chairman. A plan was presented to Congress according to which Dallas agreed to pay half the expense of making the Trinity River navigable. The estimated cost of improvements needed at that time was approximately $6,000,000. Dallas had hopes of influencing the Texas Legislature to issue bonds to help pay their part of the cost. Nothing of value resulted from this proposal.

On December 6, 1916, a hearing, presided over by government engineers, was held at Dallas for the purpose of determining whether or not sufficient benefits would result from further expenditures on the project. The latest reports of government engineers placed the cost of improvements needed at $13,000,000, and estimated that it would require fifteen years

to complete this work.[7]

The hearing at Dallas was not satisfactory to the people of that area and as a result, a new Trinity River Navigation Company was formed in 1916. This company went out of existence in 1920, and another organization, which lasted only a short while, was formed. Little was accomplished.

In September, 1919, a number of Texas Congressmen, including Senator Morris Sheppard, appeared with a delegation from Texas before the Board of Engineers which had been appointed to investigate the Trinity River situation. These representatives suggested that the Board consider the further improvement of the lower Trinity from Long Lake to the mouth of the river as separate and apart from the upper Trinity. The Board was sufficiently interested to ask the District Engineer for an additional investigation.

Another hearing, held before the District Engineer, was attended by about fifty delegates from the counties along the lower Trinity. From this hearing a supplemental report was submitted to the Board of Engineers for its consideration which contained recommendations made by the District Engineer at Galveston and the Division Engineer at New Orleans.

After much delay the Board reported in 1921 that with the exception of 41.4 miles from the Gulf of Mexico to Liberty, Trinity River navigation was not feasible and should not be attempted by the government.

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7 E. H. Brown, Trinity River Canalization, p. 52.

This recommendation was based on the fact that commerce on the Trinity River had been gradually decreasing between 1914 and 1921, and also that the surveys showed the water supply to be inadequate to provide for navigation above Liberty.[8]

According to a story in the Dallas News of October 1, 1935, the abandonment of the Trinity River enterprise resulted, not from lack of merit, but from an error on the part of a member of Congress. The chairman of the Rivers and Harbors Committee of the House of Representatives promised to report favorably on the project, but when the bill was reported the Trinity River was left out entirely. The chairman, as he explained later, was not familiar with Texas geography and transposed the names of the Brazos and the Trinity, with the result that the former was included while the latter was dropped.[9]

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8 67th Congress, 2 session, Hearings on the Subject of the Improvement of Trinity River, Texas, p. 4.

9 "Millions Spent for Dams", The Dallas News, October, 1935, p. 3.

CHAPTER IV

THE REVIVAL OF THE TRINITY RIVER PROJECT

Dissatisfaction with the railway freight rates on the part of the people of Dallas and Fort Worth led to the revival of the agitation for the navigation of the Trinity River. In 1930 the Chambers of Commerce in Fort Worth and Dallas sponsored the formation of the Trinity River Canal Association to promote the canalization of that stream. The leading people of all the counties along the river cooperated in the effort to revive interest in the project.

In explaining the purpose of the Association John M. Fouts, general manager, made this statement: "Freight can be shipped cheaper from Kansas City to Houston than it can from the same source to Dallas because both Kansas City and Houston enjoy low waterway rates. It doesn't take much figuring to realize what this means to Dallas. Completion of this project will give Dallas another form of transportation, with a rate of approximately one-third of the prevailing freight rates."[1]

A resolution adopted December 10, 1929, by the Committee on Commerce, United States Senate, requested a review of the reports on the Trinity River. On July 3, 1930, the Rivers and Harbors Act provided for another preliminary examination of that stream. In accordance with these actions,

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1 S. H. Acheson and Wayne Gard, "Trinity Navigation Movement Reaches Its Peak in 1935", The Dallas News, part 7, pp. 3-4.

the District Engineer made a combined report which was submitted on March 31, 1932. The Board of Engineers for Rivers and Harbors reviewed the report and recommended that a survey be made to determine the cost of canalization for various widths of channel and sizes of locks. Complying with this recommendation, the Chief of Engineers directed that such a survey be made from Fort Worth to the Gulf of Mexico.[2]

The railroad interests offered strong and organized opposition to the revival of the project. They claimed, in hearings held by the Board of Engineers, that the canalization of the Trinity would cost the taxpayers $100,000,000 and that the benefits derived from such a venture would be negative. A traffic survey completed by the United States Department of Commerce in 1933, however, indicated that there was sufficient tonnage in this section which could be moved on the waterway at a saving to the people which would make the project worthwhile. Therefore, under the direction of the district engineer, Colonel E. H. Marks of Galveston, army engineers made another detailed survey of the Trinity River in 1934. This work was financed by a Public Works Administration allotment of $93,000. The report which was submitted to the Board on March 18, 1935, was unfavorable to the enterprise. Not willing to see their pet project thus adversely disposed of, local interests along the river requested an opportunity to submit additional information before final action was taken by the Board

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2 77th Congress, 1 session, House Document, No. 403, p. 11.

of Engineers.[3]

The Trinity River Canal Association submitted to the Engineering Department in May, 1937, an engineering report, including a traffic survey, on a revised plan of improvement. This report, together with other papers and data was sent to the District Engineer for analysis. That official submitted his analysis and report on March 9, 1938. The survey report of 1935 and all proceedings taken in respect thereto were returned to the district office at the request of local interests, to be incorporated in a new survey and report on flood control.

When the project for the canalization of the Trinity River was revived in 1930, it was proposed purely as an inland waterway of local interest. The only existing navigation project at that time provided for a channel six feet deep and of suitable width for navigation from the mouth of the Trinity River to Liberty. This channel had been completed in 1925, the expenditures thereon to June 30, 1940, being $194,439. With the coming of the Intracoastal Canal into Texas, however, the project was removed from its local status, as plans were made to make the Trinity Canal a tributary to the great national inland waterway. This enlarged project was endorsed by practically all the leading waterway associations in the United States.

In 1935 a move had been made to coordinate the work of the Army Engineers with other federal agencies in order that the benefits derived would be more widespread and the cost proportionately less.

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3 Ibid., p. 111.

In 1936 there were two separate investigations under way on the Trinity River; one of navigation, the other, of flood control. The Army Engineers agreed to change over to the Omnibus Flood Control Act of 1936 and make one report involving all phases of river improvement. Their report would then be coordinated with a parallel report of the Secretary of Agriculture, authorized by a Conservation Act passed in 1935, covering a conservation and flood control program for the entire Trinity River watershed.[4]

On May 26, 1938, members of the Trinity River Canal Association and members of the Trinity Watershed Soil Conservation and Flood Control Associations merged the two organizations into the Trinity Improvement Association. A new board of directors and new officers were elected.

This organization was formed to give complete cooperation to the War Department and the Department of Agriculture in their study of the Trinity River. The association agreed to sponsor flood control, soil and water conservation, navigation, alleviation of stream pollution, conservation of wild life, and storage of water for municipal, industrial, and agricultural uses along the Trinity River.

The Omnibus Flood Control Act passed by Congress in 1936 made possible a coordinated survey of the Trinity River by the War Department and the Department of Agriculture. These two departments were instructed in 1938 to make a new and complete study of this stream and

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4 John M. Fouts, "Flood Control of Turbulent Trinity", Trinity River News, June, 1939, p. 1.

and $300,000 of federal money was set aside for this work. This was the first survey of its kind ever to be made in the history of the United States. It embraced flood control, navigation, soil conservation, reclamation of flooded lands, and reforestation.

By early spring 1938, surveying parties for the Department of Agriculture, which included experts on matters which affected the prosperity of every Texas farmer and rancher, started to work on the Trinity watershed. The majority of those in charge were Texans or residents of the Southwest who were well acquainted with conditions there. The survey was completed in October, 1939, as scheduled.

The War Department began its work in June, 1938. Parties of engineers worked from the tributary streams north of Dallas and Fort Worth down to the Gulf of Mexico. Every mile of the Trinity was surveyed and plotted, locations for locks and dams were designated, and plans were made to create a great chain of navigable lakes from Fort Worth to the sea.

Colonel Frank S. Bessor, the District Engineer, who had charge of the work from the beginning, inspected the river many times. In addition, the War Department had an organization of business experts from the Southwest to check the advantages of water transportation in Texas and estimate the tonnage which could be carried by barge to tidewater on a canalized Trinity River.[5]

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5 "U. S. War Department Finishes Detailed Survey of Trinity River", Trinity River News, December, 1939, p. 3.

In March, 1939, the Texas Legislature enacted the State Soil Conservation Law providing for the establishment of legally constituted districts for carrying out soil and water conservation measures. This was done in order to meet the requirements for federal aid in carrying out such a program.

The conservation plan proposed by the Department of Agriculture provides for the retardation of water flow and the prevention of erosion through the proper use of cultivated lands, pastures, and woodlands to reduce soil and water losses; the conversion of eroded lands to pasture, meadow, and woodland; the public purchase and treatment of land in badly eroded areas; and the installation of fire control measures. It is contemplated that the treatment of farm land will consist of improvements in cropping, such as rotation, using cover crops, contour cultivation, strip-cropping, planting trees, and the installation of terraces.

As a result of the survey concluded in October, 1939, by the Department of Agriculture, the Secretary of Agriculture recommended that $32,000,000 be authorized and appropriated by Congress to be used on the Trinity River watershed. This money would be distributed through the State Soil Conservation Districts over a period of fifteen years. Federal funds could be used to pay for the construction of one-half of the required terraces and diversion ditches, the construction of one-half of the required terrace outlets, the revegetation of all areas permanently retired from cultivation, and other

worthwhile projects.[6]

Proponents of the Trinity River project, as at present formulated, desire a navigable waterway from Fort Worth to the mouth of the Trinity River, thence through Galveston Bay to the Houston Ship Channel. They have estimated the cost as $66,546,000 and claim 4,751,000 tons of traffic would develop providing annual savings of $10,126,000 in transportation costs. They point out that the waterway will permit the development of the natural resources in the valley, result in the growth of the major cities along the river, and serve to maintain lower freight rates throughout the Southwest.

Local interests offer to maintain a regulated water supply through the use of the six reservoirs that have been previously constructed by Dallas and Fort Worth at a cost of between twelve and fifteen million dollars. They also propose to assume the cost of all rights-of-way and disposal areas; to alter, remove, or reconstruct all bridges and utilities over the natural channel; to construct and maintain suitable roads to all lock and dam sites; to provide adequate terminal and transfer facilities; and to hold the United States free from damages incident to or growing out of the construction and operation of the waterway.[7]

The people along the river have requested no specific projects for flood control, but have expressed a desire for a general plan of

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6 "Trinity Flood Control and Soil Conservation", Trinity River News, July, 1942, p. 5.

7 77th Congress, 1 session, House Document, No. 403, p. 2.

improvement in the interest of flood control, soil conservation, and the conservation of water for all useful purposes. In this connection local interests have created four levee districts for the protection of lowlands near Fort Worth and Dallas, and fifty-two districts for the protection of agricultural lands. Approximately four hundred miles of levees have been constructed in the organized levee districts at a total cost of $16,000,000.

On November 15, 1939, the District Engineer submitted a report of his survey of the Trinity River. In this report he recommended a comprehensive plan of improvement providing for a channel of not less than nine feet deep and 150 feet wide from the Houston Ship Channel in Galveston Bay to Fort Worth. Twenty-six locks and dams were to be constructed between Fort Worth and the mouth of the river. The cost of the improvements to the United States was estimated as $95,735,316, while the cost to local interests was estimated at $9,987,914.

Improvements recommended for flood control and conservation provided for protection principally in the Fort Worth and Dallas areas, since most of the floods throughout the Trinity River region originate on the upper reaches of that stream. The District Engineer proposed to build five new reservoirs to be used in conjunction with the six that had been constructed by local interests, and the modification of the existing levees in the vicinity of Fort Worth and Dallas. The cost of these improvements was estimated as $19,147,726.

The report of the District Engineer was approved by the Division Engineer in January, 1941, and the Board of Engineers for Rivers and

Harbors endorsed the improvements for flood control in August of the same year. The Board was of the opinion, however, that the canalization of the river to Fort Worth was not justified at that time, but it pointed out that this project may be a worthy public work to be undertaken when measures for the relief of unemployment become necessary. It recommended, therefore, that the entire comprehensive plan of improvement be accepted by the government, but that only the section from the Houston Ship Channel to Liberty be canalized at that time.

On November 10, 1941, a general Rivers and Harbors Act was introduced into the House of Representatives by Mr. J. J. Mansfield, Chairman of the Rivers and Harbors Committee. This bill contained the following provisions in regard to the Trinity River:[8]

> The improvement of the Trinity River and tributaries, Texas, for navigation, flood control, and allied purposes is hereby approved and authorized in accordance with reports contained in House Document Numbered 403, Seventy-seventh Congress: Provided, That the Navigation project in its entirety is hereby authorized to be undertaken when in the opinion of the Secretary of War and the Chief of Engineers, the ratio of benefits to costs makes its construction economically justified.

This bill was amended by the Rivers and Harbors Committee so that no appropriation could be made or any construction begun until six months after the termination of the present war in which the United States is engaged unless recommended by a defense agency and approved by the President as being necessary to national defense. The amended bill was committed to the Committee of the Whole House on November 21,

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8 Congress, 1 session, Harbor and River Bill 5993, pp. 16-17.

1941, and ordered to be printed. Although the bill as amended was strongly approved by President Roosevelt, it was never brought to a vote.

Thus the question of navigation on the Trinity River has plagued Congress since 1872. During this time more than $3,000,000 was expended by the Federal Government for making surveys, for the construction of locks and dams, for dredging, and for opening channels. In the same period local interests along the river spent approximately $50,000,000 in building reservoirs, raising bridges, and other work incidental to the enterprise. With the exception of forty-one miles from the mouth of the Trinity to Liberty, the dream of navigating that stream is not much nearer realization than when the project was first inaugurated. Further development of the project must, therefore, await the cessation of the present war, when, no doubt, concerted efforts will be made to revive the interest of the National Government in this work.

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