

ANTHONY WAYNE: THE HISTORY AND ARCHAEOLOGY OF AN EARLY
GREAT LAKES STEAMBOAT

A Thesis

by

BRADLEY ALAN KRUEGER

Submitted to the Office of Graduate Studies of
Texas A&M University
in partial fulfillment of the requirements for the degree of

MASTER OF ARTS

May 2012

Major Subject: Anthropology

Anthony Wayne: The History and Archaeology of an Early Great Lakes Steamboat

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May 2012

Major Subject: Anthropology

ABSTRACT

Anthony Wayne: The History and Archaeology of an Early Great Lakes Steamboat.

(May 2012)

Bradley Alan Krueger, B.A., University of Michigan

Chair of Advisory Committee: Dr. Kevin J. Crisman

The Great Lakes side-wheel steamboat *Anthony Wayne* was built in 1837 at Perrysburg, OH and participated in lakes shipping during a time when such vessels were experiencing their heyday. Designed as a passenger and cargo carrier, the steamer spent 13 years transporting goods and people throughout the Upper Lakes until succumbing to a boiler explosion while headed to Buffalo on 28 April 1850.

The remains of *Anthony Wayne* were discovered in 2006 and two years later a collaborative project was begun for the purposes of documenting and assessing the present day condition of the wreck. *Anthony Wayne* is the oldest steamboat wreck on the Great Lakes to be studied by archaeologists and represents an important piece of maritime heritage that can aid researchers in understanding architectural and machinery specifics that are unknown to us today.

This thesis presents the results of an archaeological and archival investigation of *Anthony Wayne*. Information pertaining to the discovery and significance of the vessel are presented, followed by descriptions of Perrysburg and its shipping industry, the steamer's owners, and how the vessel was built. The operational history of *Anthony*

Wayne is then outlined chronologically, including ports of call, cargoes, masters, and incidents the steamer experienced. Details of the explosion and the aftermath of the sinking are then discussed, followed by a brief summary of other Great Lakes steamboat catastrophes from 1850 and why boilers explode. Focus then shifts to the two-year archaeological investigation, including project objectives, methodology, and findings. The construction specifics of the steamboat's hull, drive system, and associated artifacts are then presented, followed by post-project analysis and conclusions. A catalog of Great Lakes steam vessels, vessel enrollment documentation, the coroner's inquest following the disaster, and the initial dive report from the discoverers are furnished as appendices.

DEDICATION

To those lights in my life that have guided me through calm and stormy seas

ACKNOWLEDGEMENTS

The historical and archaeological investigation of the steamboat *Anthony Wayne* was completed with the ardent support of many individuals, institutions, and organizations. First, I would like to recognize my thesis committee chair, Dr. Kevin J. Crisman. Dr. Crisman has generously contributed his time, knowledge, and resources so that this thesis could come to fruition. His understanding of both North American maritime history and the related world of nautical archaeology is what brought me to Texas A&M University. Being able to work with Dr. Crisman both in the classroom and in the field has been an amazing experience, and he has my sincerest appreciation for the opportunities he has afforded me during my tenure as a graduate student. In addition, I would like to thank thesis committee members Drs. Filipe Castro and Charles Brooks for their generous insight and contributions to this scholarly work, as it has been a great pleasure to work with them both. Support from the Nautical Archaeology Program at Texas A&M University also made this investigation possible.

A note of thanks must be paid to Carrie Sowden, archaeological director of the Peachman Lake Erie Shipwreck Research Center at the Great Lakes Historical Society. Ms. Sowden served as co-director of the *Anthony Wayne* Shipwreck Survey for the 2008 and 2009 field seasons, bringing with her a high degree of professionalism and expertise in regard to the underwater recording of historic shipwrecks.

Thomas Kowalczyk has also been instrumental to the success of this project from the beginning, in truth it could not have happened without his support. As the discoverer

of the *Anthony Wayne* wreck site, I am indebted to him for his willingness to share vital information, assistance in the field, and his valuable insight to Great Lakes maritime history. His involvement, along with that of the Cleveland Underwater Explorers, has been vital to the success of our summer endeavors. It has certainly been a pleasure to work with Tom and I hope to have many more opportunities to do so in the future.

The archaeological component of this thesis could not have been possible without the assistance of a dedicated group of archaeologists, divers, and volunteers. The unique enthusiasm and hard work exhibited by these individuals was not only welcomed, but whole-heartedly appreciated. The field crews who made this project so successful are listed below:

2008 Field Season: Carrie Sowden, Thomas Kowalczyk, Will Moser, Matt Mossman, Mike Mossman, Kara Hornthumb, Benjamin Ford, and Christopher Morris;

2009 Field Season: Carrie Sowden, Thomas Kowalczyk, Will Moser, Heather Jones, Matt Mossman, Mike Mossman, Taylor Brooks, Tyler Cullinan, Christine Misterka, and David VanZandt.

Financial and in-kind support for archaeological fieldwork was provided by the following: Dr. Kevin Crisman, Texas A&M University; the Great Lakes Historical Society; the Institute for Nautical Archaeology; the Ohio Department of Natural Resources; the Ohio Council of Skin and Scuba Diver, Inc.

There are several other individuals I would also like to acknowledge for their contributions to this project: Christopher Gilchrist, Dr. James Delgado, C. Patrick Labadie, Bob Graham, Jack Papes, David Van Zandt, and Jim Paskert.

I offer my sincerest thanks to both family and friends who have supported me through the entirety of this endeavor: Edward and Cathleen Krueger, Kate Maher, Margaret Prest, John Littlefield, Ryan Lee, Will Moser, Heather Brown, Kate Morrand and my fellow comrades from the Nautical Archaeology Program.

NOMENCLATURE

BGSUC	Bowling Green State University Collection
GLHSC	Great Lakes Historical Society Collection
MHGLC	Maritime History of the Great Lakes Collection
TBNMSC	Thunder Bay National Marine Sanctuary Collection

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CHAPTER I

INTRODUCTION

Steamboat Archaeology on the Great Lakes

In the spring of 1850, the side-wheel steamboat *Anthony Wayne* suffered a terrible boiler explosion and sank in Lake Erie off Vermilion, Ohio, taking with it 38 souls. Prior to its sinking, *Anthony Wayne* operated for 13 years as a successful passenger and cargo carrier, securing a reputation as a handsome and reliable steam vessel. Launched in 1837 at Perrysburg, Ohio, the side-wheeler ran during a time when steamboats were a significant form of transportation on the lakes and contributed greatly in the shaping of the American western frontier. In 2006, more than 161 years after the catastrophic loss, the steamer's remains were discovered on the bottom of Lake Erie by an Ohio shipwreck explorer. Subsequent visits to the site and preliminary reconnaissance investigations identified the vessel as *Anthony Wayne*, prompting the creation of an archaeological project to document the wreck site and assess its present day condition. To date, *Anthony Wayne* is believed to be the oldest known archaeological example of a side-wheel steamboat in the entire Great Lakes.

Primary and secondary historical sources were consulted to see *Anthony Wayne*'s role in contemporary inland maritime transportation. The introduction of steam-powered watercraft to the lakes during the 19th century is a topic that has been discussed by many authors throughout the last century.¹ In these accounts, a macro perspective of historical

This thesis follows the style and format of the *American Journal of Archaeology*.

events is usually favored, with specific vessels mentioned sporadically to punctuate or highlight a particular milestone. Some recount the tale of the early steamboat industry in more explicit detail, but these histories focus attention on several vessels simultaneously in order to arrive at a more complete depiction of the past.² The tendency with these histories is to focus on larger issues and trends within Great Lakes transportation and many details are omitted, such as vessel design, construction specifications, drive system arrangement, and so on. These works are beneficial for those interested in maritime technology, and serve as a launching pad for more in-depth studies on the topic of steamboats on the inland seas.

Construction details of antebellum merchant steamers were generally not recorded contemporaneously and much of what was known of these vessels has been lost over time. Plans of ships, both steam and sail driven, were rare to begin with, as shipbuilders traditionally passed down this knowledge through apprenticeships and oral traditions.³ This leaves maritime researchers very little in the historic record to turn to and often more questions are generated than answered. One way to approach this dilemma is by gathering archaeological data from steamboat wrecks to fill the gaps in history. Material culture and technology studies have been successfully conducted by archaeologists over the past 20 years on the mid-19th-century Great Lakes side-wheelers *New Orleans*,⁴ *Niagara*,⁵ *Maple Leaf*,⁶ *Superior*,⁷ and the propeller *Indiana*.⁸ In each

¹ Beers 1897; Bingham 1888; Mansfield 1899; Bulkley 1913; Hatcher 1944.

² Plumb 1949; Chapin 1954-5; Wright 1958; Hilton 2002.

³ Robinsion 1999, 6.

⁴ Vrana 2004.

⁵ Jensen 1999.

⁶ Cantelas 1993.

instance, all remaining hull and machinery components were documented and then analyzed within a historical context in order to interpret the wreck site.

While these studies have significantly advanced the field of Great Lakes steamboat archaeology, the body of data is still very limited. Few steamboat wrecks exist from the era have been found and even fewer have been documented by professional archaeologists.⁹ The extant architectural and technological elements vary from wreck to wreck, making it difficult to arrive at conclusions about regional shipbuilding conventions and trends. One component usually absent from most sites is the vessel's machinery: the engines, boilers, and pumps were typically salvaged shortly after sinking and reused in other hulls. This practice was economical for steamboat owners, but meant that very little machinery exists today in the archaeological record. Each steamboat wreck is unique in its own right, but amassing larger data sets coupled with specific vessel histories will allow for more accurate and detailed models to be formed on how Great Lake steamers were conceptualized, assembled, and operated in the 19th century.

Discovery of *Anthony Wayne*

The wreck of *Anthony Wayne* was officially discovered in 2006 by Tom Kowalczyk, a shipwreck enthusiast and member of the Cleveland Underwater Explorers (CLUE). Kowalczyk searched for *Anthony Wayne* on and off since the early 1980s,

⁷ Labadie 1989.

⁸ Robinson 1999.

⁹ Vrana (2004, 6.16) states that there are 22 known side-wheel steamboat sites in the Great Lakes and of these 7 have received "reconnaissance level professional archaeological investigation."

spending countless hours researching details of the steamer's loss and the general area of its final resting place. Utilizing a combination of side-scan sonar and scuba diving, Kowalczk methodically combed the waters off Vermillion, always noting where he searched.

This persistence finally paid off in September of 2006, in a location 7 miles (11.27 km) north of Vermilion. Kowalczk's side-scan revealed two large objects in close proximity to each other and protruding well above the lake bottom, indicating the likely presence of a shipwreck (Figs. 1, 2). Harsh weather prevented Kowalczk from diving on the site for confirmation, but divers from CLUE were able to visit the target in May 2007. The find proved to be an old steamboat broken into two parts: the midship section, complete with two large standing paddlewheels; and the bow section. Given the location of the wreckage, features of the vessel, and its preliminary dimensions, Kowalczk and CLUE concluded that they had indeed located the remains of *Anthony Wayne*. The discovery of the steamer was announced later that summer by CLUE in association with the Great Lakes Historical Society.

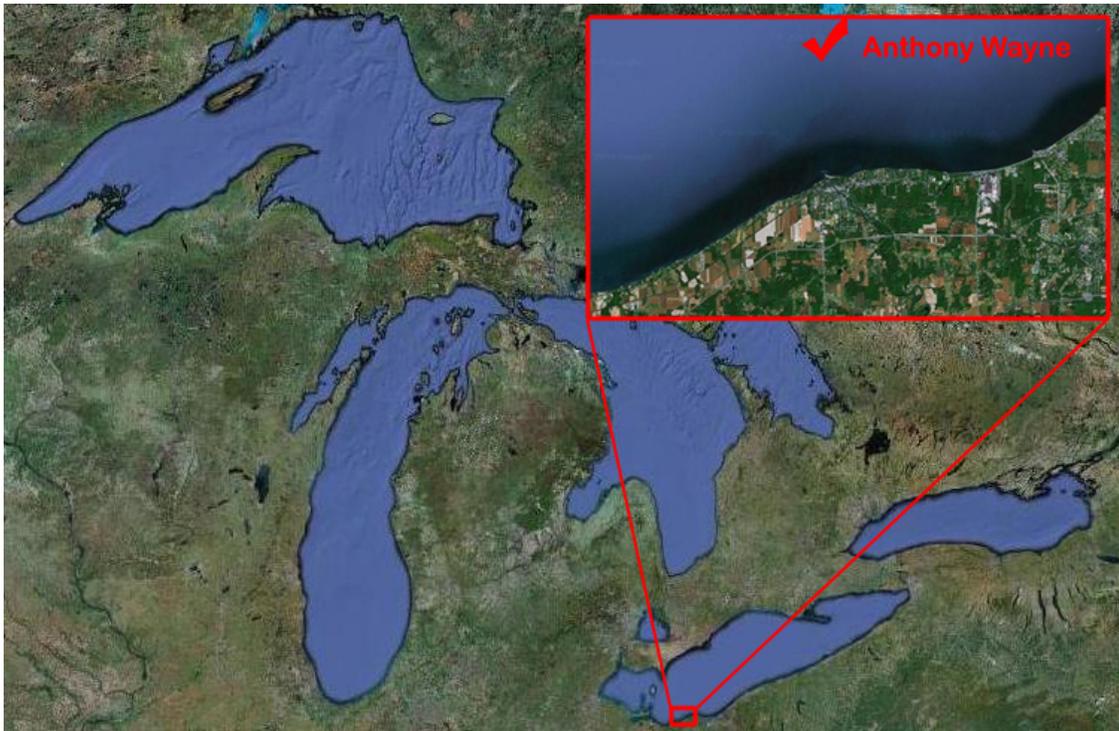


Figure 1: Map showing the location of *Anthony Wayne*. (Google Earth 2009)

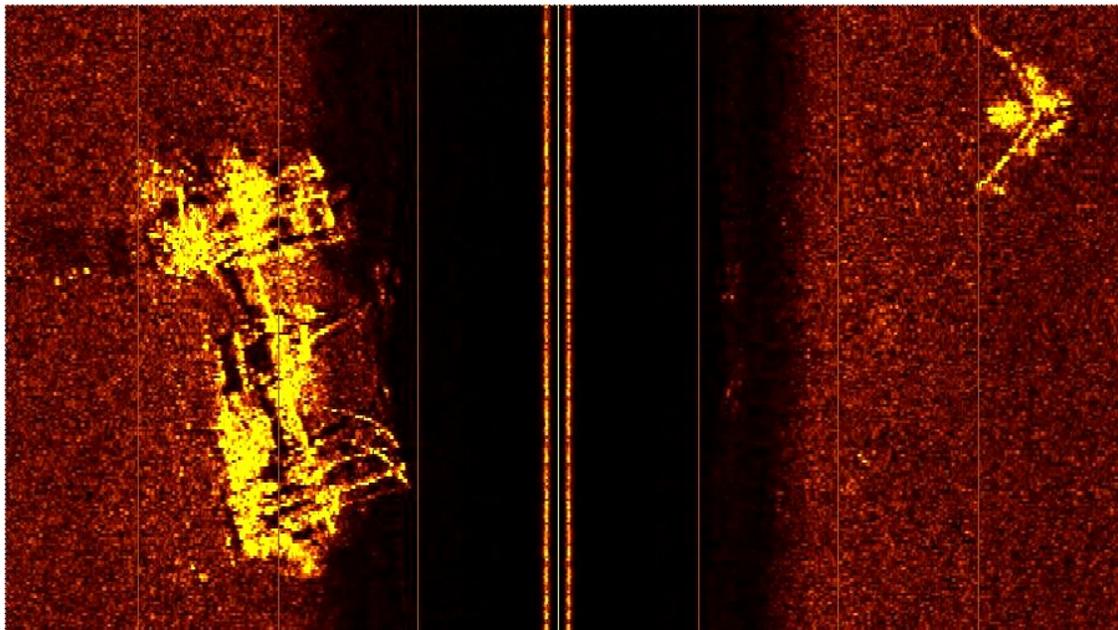


Figure 2: Side-scan sonar image of *Anthony Wayne*. (Courtesy of T. Kowalczyk)

Following the announcement of the discovery, the Great Lakes Historical Society contacted Texas A&M University regarding the possibility of investigating the wreck site. The Society's Archaeological Director and Executive Director, Carrie Sowden and Christopher Gilcrest, arranged for a collaborative project with the author, a graduate student in the Nautical Archaeology Program at Texas A&M. Steps were then put into motion to conduct a two year study of the archaeological remains to learn about the construction, machinery, and shipboard life of an early merchant steamer.

The Significance of *Anthony Wayne*

Investigation of *Anthony Wayne* provides a rare opportunity for maritime historians and nautical archaeologists alike. Even though steam technology was once a vital element in the Great Lakes transportation industry, details of steamboat hulls and machinery are scarce in the historical record. No literature survives to the present day that outlines how steamboats in this region were built and outfitted during the early and middle decades of the 19th century. The especially holds true for *Anthony Wayne*, as no drafts or construction contracts have been found beyond the dimensions and tonnage listed on the steamer's enrollment documents.

Information about *Anthony Wayne* historical context does exist, however, in contemporary newspapers from around the region. Articles, advertisements, and marine reports give a glimpse into many aspects of the vessel's operational history, including how it was managed and utilized. More abstractly, these sources allow us to investigate

how *Anthony Wayne* and similar steamboats participated in the socio-economic networks on the western frontier.

As previously discussed, archaeological examples of antebellum steamboats are relatively rare in the Great Lakes, yet steamboat shipwreck studies have added greatly to our understanding of these vessels. *Anthony Wayne* represents the oldest remains of merchant side-wheeler. This is significant as *Anthony Wayne* can potentially answer questions about trends in regional shipbuilding practices and the specifics of the steam-powered machinery used to propel these vessels over the Inland Seas.

Methodology and Analysis

The *Anthony Wayne* study has two distinct components, an archaeological investigation and a historical investigation. Archaeological field work took place in 2008 and 2009 in cooperation with the Great Lakes Historical Society, CLUE, and the Center for Maritime Archaeology and Conservation at Texas A&M University. The primary objectives of the field seasons were to assess the present-day condition of the wreck site, document exposed architectural and mechanical components, and conduct limited excavation to ascertain the extent of buried material still present on the site. Field recording consisted of making detailed sketches, taking measurements via trilateration, and utilizing underwater photography and videography. Sub-surface probing was conducted between the two primary sections of wreckage and an induction dredge system was used to remove sediment from areas where buried material likely exists. All

artifacts were thoroughly documented and photographed, then re-deposited on site before the conclusion of the excavation.

The historical component of the proposed thesis research was conducted during and after field excavations. Historical newspapers from throughout the Great Lakes region served as the primary source for details of *Anthony Wayne*'s construction, launch, operational history, and sinking. U.S. Government vessel enrollment documents were also obtained to determine vessel dimensions and ownership. To put *Anthony Wayne* into a broader context of 19th-century Great Lakes maritime transportation, both local and regional histories were also referenced.

Archaeological and historical data were analyzed simultaneously to draw conclusions about *Anthony Wayne* itself and Great Lakes steamboats as a whole. The goal of this was to compare information acquired from one particular shipwreck with other examples of side-wheelers to find similarities and differences in construction, outfitting, and propulsion, and to identify wider shipbuilding trends. Particular attention was paid to *Anthony Wayne*'s drive system and an attempt was made to reconstruct the missing components, as well as offer a hypothetical arrangement of architectural details which are presently inaccessible.

CHAPTER II

BUILDING THE STEAMBOAT *ANTHONY WAYNE*

The Shipbuilding Industry of Perrysburg, Ohio¹⁰

Anthony Wayne was built during the winter season between 1836 and 1837 at the town of Perrysburg, Ohio (Fig. 3).¹¹ Located on the Maumee River¹² 13.35 miles (21.50 km) southwest of Lake Erie, the Perrysburg area was linked with ships and shipbuilding even before the town's founding in 1816.¹³ This area of northwestern Ohio, known as the Great Black Swamp, was a sparsely occupied marshland at the turn of the 19th century, plagued with disease, insects, and occasionally hostile natives. As regional historian N.O. Winter states, "It was but natural that the pioneer settlers of northwest Ohio, where the roads were almost impassable for a good part of the year, should turn to the water facilities afforded by the two great rivers, Sandusky and Maumee, and expansive Lake Erie for their earliest transportation."¹⁴ The few roads that did exist were impassable during rainy seasons, offering traders long, uncomfortable, and potentially dangerous journeys. Deeply-rutted, muddy roads wreaked havoc on wagons, while passengers endured constant jostling, sometimes to the point of injury or sickness. Most early settlers arrived in this region via boats, so it should come as no surprise that they

¹⁰ The original spelling of the town was "Perrysburgh", but the *h* was dropped in the mid-19th century.

¹¹ "New Steam-Boat," *Cleveland Weekly Advertiser* 8 December 1836, 2.

¹² The Maumee River was originally called the Miami of the Lake, or simply the Miami, as early as the 17th century. It took on its present name in the middle 18th century.

¹³ Danford 1992, 15-6.

¹⁴ Winter 1917, 1:244.

quickly gravitated to the vast system of interconnected waterways to meet their transportation needs.

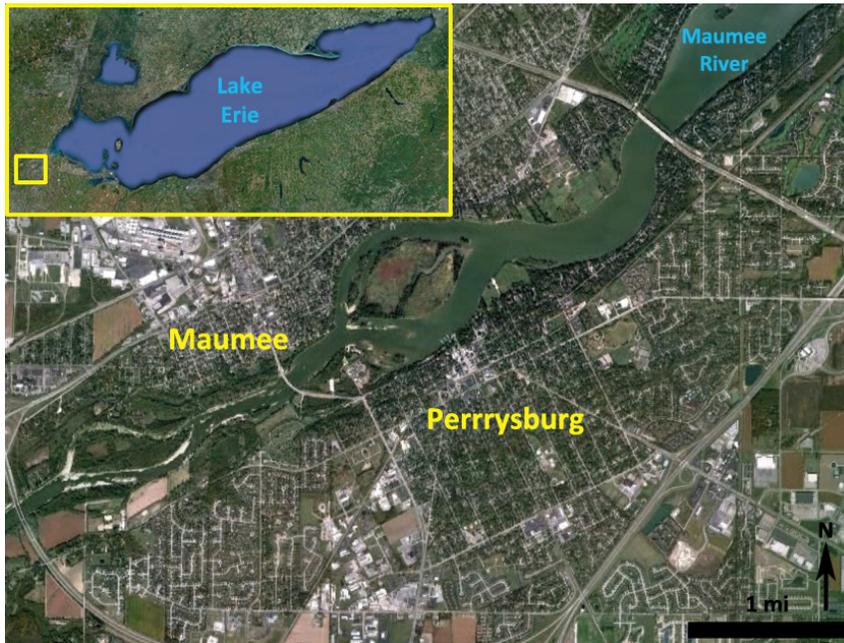


Figure 3: Map Showing Perrysburg, Ohio. (Google Maps 2010)

The first vessel to be built in the Perrysburg region was the *Cuyahoga Packet*.¹⁵ Built on the Maumee River between 1810 and 1811 by Captain Anderson Martin, *Cuyahoga Packet* was a schooner of approximately 25 tons and intended to operate as a merchant trader along the southern shore of Lake Erie.¹⁶ The vessel was launched during a politically turbulent time, as tensions were mounting between the Americans and British which ultimately led to war in June 1812. The schooner was subsequently hired

¹⁵ TBNMSC 2010.

¹⁶ Mauer 1943, 168.

by the United States Navy and changed hands several times during the war before being burned by the British in December 1813.¹⁷

Shipbuilding at Perrysburg was suspended until the war ceased in February 1815. With peace restored, the Great Lakes commenced an era of renewed mercantile endeavors, with a consequent increase in shipping and shipbuilding. The shipping industry of Perrysburg started around this time and is attributed to Captain Jacob Wilkinson.¹⁸ Wilkinson built a small schooner of 20 or 25 tons named *Black Snake* early in 1815 at Cleveland for the purpose of transporting settlers and supplies to the western end of Lake Erie.¹⁹ *Black Snake* made its first voyage in May and according to Captain Wilkinson's daughter, Amelia W. Perrin, the schooner made this trip laden with immigrants who landed at Fort Meigs and River Raisin (now Monroe, Michigan).²⁰ After the passengers disembarked, Captain Wilkinson proceeded northward to Detroit to deliver the recently dismantled armament of Fort Meigs, after which he made his way east to Buffalo.²¹ In 1816, Wilkinson resettled at Orleans on the Maumee River, where he continued to be involved in Lake Erie shipping until his death in 1834.²²

Wilkinson helped sow the seeds of an industry that would define the region and its people. Following in his footsteps was his nephew, David Wilkinson. David, born

¹⁷ *Cuyahoga Packet* was also known as *Miami* and *Chippewa* (Antal 1998, 36-7; Malcomson 2006, 133; TBNMSC 2010).

¹⁸ Captain Wilkinson, born 30 March 1777, wife Sallie, and family came to northwestern Ohio in 1811 and settled at Orleans, a small village nestled between Fort Meigs and the Maumee River. When the War of 1812 began, fighting forced the family back east to Cleveland where they remained until the end of the war (Beers 1897, 1230; Winter 1917, 1:244; Danford 1992, 14).

¹⁹ Beers 1897, 358; Knapp 1877, 435-6; Waggoner 1888, 438; Slocum 1905, 363; Winter 1917, 1:244; Mauer 1943, 161; Danford 1992, 14.

²⁰ Beers 1897, 1:358.

²¹ Slocum 1905, 363; 477.

²² Beers 1897, 1231.

1800, came to live with his uncle and aunt during his teenage years following the death of his father.²³ It was around this time that David began to learn the trade of sailing from his uncle. David served as a deckhand on *Black Snake* during its voyage to the western Lake Erie in 1815.²⁴ Two years later, in 1817, he took over as captain of *Black Snake* and began his career as one of the most notable and respected lake captains of the early 19th century (Table 1).

Table 1: Vessels Commanded by Captain David Wilkinson.²⁵

Vessel Name	Vessel Type	Tonnage	Built
<i>Black Snake</i>	Schooner	21	1815
<i>Pilot</i>	Schooner	54	1825
<i>Mary (or Nancy) Jane</i>	Schooner	-	-
<i>Guerriere</i>	Schooner	14	1826
<i>Eagle</i>	Schooner	130	1828
<i>Oliver Hazard Perry</i>	Steamboat	383	1834
<i>Superior</i>	Steamboat	646	1845

The 1820s saw limited growth for Perrysburg, but it was not until the 1830s that the town emerged as an active port town. Settlers and immigrants moved further westward into the frontier of the United States, and as a result the population of the entire area around Perrysburg grew (Table 2).²⁶ This was due, in part, to its location on the western end of Lake Erie, which became a hub for regional trading and enterprise.

²³ Beers 1897, 358.

²⁴ Mauer 1943, 165.

²⁵ Beers 1897, 183-4; Knapp 1877, 437; Danford 1992, 14; Mauer 1943, 165.

²⁶ Mauer 1943, 163.

Small boats transported goods and resources from Perrysburg and Maumee down the river to lake vessels bound for Cleveland, Buffalo, or Chicago. These cargos consisted of wheat, timber, animal pelts, and other agricultural goods bound for faraway markets.²⁷ This network developed even further with the introduction of railroads, canals, and improved waterways.

Table 2: Population of Wood County, Ohio.²⁸

Year	Population
1820	733
1830	1,102
1840	5,357
1850	9,157
1860	17,886

As lake travel increased during this period, the demand for boats greatly increased. At Perrysburg, specifically, full-time shipbuilding began in the late 1820s (Table 3). The first boats built were small- to medium-sized sailing craft rigged as schooners. These vessels were ideal for lake trade due to their handling and maneuverability, combined with a draft shallow enough to traverse the waters of the Maumee River. The displacement of these craft averaged around 70 tons, and only occasionally exceeded 100 tons.

²⁷ Mauer 1943, 162.

²⁸ Ohio County Profiles: Wood County 2010.

Table 3: Vessels Built in Perrysburg, 1810 - 1850.²⁹

Vessel Name	Vessel Type	Tonnage	Built
<i>Cuyahoga Packet (Miami)</i>	Schooner	25	1810
<i>Guerriere</i>	Schooner	50 [75]	1826
<i>Michigan</i>	Schooner	130	1832
<i>Oliver Hazard Perry</i>	Side-wheel Steamboat	382	1834
<i>Caroline</i>	Schooner	60 [50]	1835
<i>Walter Joy</i>	Schooner	130	1836
<i>John Hollister</i>	Schooner	80	1836
<i>Anthony Wayne</i>	Side-wheel Steamboat	390	1837
<i>Favorite</i>	Schooner	170 [150]	1837
<i>General Vance</i>	Side-wheel Steamboat	100 [50]	1838
<i>John Marshall</i>	Side-wheel Steamboat	80 [35]	1838
<i>Wabash</i>	Schooner	44	1838
<i>Sampson</i>	Propeller Steamboat	250	1843
<i>St. Louis</i>	Side-wheel Steamboat	600 [618]	1844
<i>Princeton</i>	Propeller Steamboat	300 [400]	1845
<i>Scotland</i>	Schooner	200 [100]	1845
<i>Superior</i>	Side-wheel Steamboat	600 [646]	1845
<i>Robert Hollister</i>	Schooner	200	1846
<i>Defiance</i>	Schooner	170	1847
<i>St. Mary</i>	Schooner	180	1847
<i>John Hollister</i>	Side-wheel Steamboat	200 [300]	1848
<i>Lake Erie</i>	Schooner	250	1848
<i>Maumee Valley</i>	Schooner	-	1848

²⁹ Waggoner 1888, 438-9; Danford 1992, 24. Note: discrepancies are noted in brackets.

A principal figure in the establishment of the shipbuilding industry in Perrysburg was merchant John H. Hollister. Hollister originally hailed from Pittsfield, Massachusetts, and was one of ten brothers who were all made a living either procuring, selling, and/or shipping resources from the West.³⁰ Hollister and his brother William set out to western Ohio in 1817 with hopes of opening a general store along the Maumee River.³¹ Initially, the two began trading furs and other goods with local Native American tribes and soon after established a store and warehouse on the banks of the Maumee. As soon as the business was up and running, brother William moved to Buffalo to start a similar venture, and another brother, George, joined John Hollister in Perrysburg.

With the brothers involved in mercantile activities of one form or another, the Hollister family pooled their resources and started a freight forwarding service for the Upper Lakes. In order to successfully carry out this endeavor, Hollister began financing his own shipping fleet. Not surprisingly, the first vessels in the fleet were small sailing craft. While it is unknown exactly how many sailing vessels Hollister principally owned himself, the earliest on record is the 14 ton schooner *Guerriere*.³² Built in 1826, this two-masted schooner was co-owned by Hollister, brother William, and David Wilkinson.³³ *Guerriere* operated on Lake Erie for six years carrying passengers and goods all across Lake Erie, until succumbing to a squall en route to Detroit in 1832.³⁴ Despite the loss of *Guerriere*, Hollister continued financing ship construction and soon expanded into

³⁰ Waggoner 1888, 470-1; Walker 1902, 308.

³¹ Waggoner 1888, 470-1; Danford 1992, 24.

³² MHGLC 2010; TBNMSC 2010.

³³ *Buffalo Emporium* 20 May 1826; Vessel Enrollment 1830 (MHGLC 2010).

³⁴ TBNMSC 2010.

steamboats to expand his shipping fleet. The Perrysburg entrepreneur had a stake invested in at least nine steamboats built in this town in addition to several sailing vessels (supra Table 3).

Table 4: Vessels principally and partially owned by John H. Hollister.³⁵

Vessel	Type	Tonnage	Built
<i>Guerriere*</i>	Schooner	14	1826
<i>Eagle</i>	Schooner	60	1828
<i>Oliver Hazard Perry</i>	Side-wheel Steamboat	352	1834
<i>Caroline</i>	Schooner	60	1835
<i>John Hollister</i>	Schooner	89	1836
<i>Walter Joy</i>	Schooner	75	1836
<i>Anthony Wayne</i>	Side-wheel Steamboat	390	1837
<i>General Vance</i>	Side-wheel Steamboat	100	1838
<i>Samson</i>	Propeller Steamboat	250	1843
<i>Hercules*</i>	Propeller Steamboat	256	1844
<i>St. Louis*</i>	Side-wheel Steamboat	618	1844
<i>Princeton*</i>	Propeller Steamboat	456	1845
<i>Troy</i>	Side-wheel Steamboat	547	1845
<i>Robert Hollister</i>	Schooner	200	1846
<i>St. Mary</i>	Schooner	180 (253)	1847
<i>Bucephalus</i>	Propeller Steamboat	400 (493)	1852

*Owned in partnership with his brother William Hollister.

³⁵ Waggoner 1888, 438-9; TBNMSC 2010; MHGLC 2010.

The first steamboat built at Perrysburg was *Oliver Hazard Perry* in 1834, financed and operated by the Perrysburgh Steamboat Company. Nicknamed *Commodore Perry* for the American naval commander at the Battle of Lake Erie in 1813, the nearly 360 ton steamer was launched in September and intended to service the route between Perrysburg and Buffalo (Fig. 4).³⁶ Adorned with expertly crafted carvings and paintings highlighting the famous naval engagement, *Oliver Hazard Perry* was considered “a floating castle on Lake Erie,” and was a favorite of local citizens.³⁷ Built by the shipwright Augustus Jones, the vessel had a length of 146 ft. 6 in. (44.65 m), 26 ft. 4 in. (8.03 m) breadth, and 9 ft. 5 in. (2.87 m) depth of hold, and was valued at \$35,000.³⁸ *Oliver Hazard Perry* operated under the watchful eye of Captain David Wilkinson, the first steam-powered vessel he ever commanded.³⁹ Aside from information concerning the vessel’s construction and launch, little else is known about Perrysburg’s first steamboat. It remained operational until at least 1845, at which point its machinery broke while on a trip to Detroit from Buffalo.⁴⁰ After this incident, no further mention of this steamer can be found. Because the vessel was over ten years old at the time of the accident, its owners may have decided to abandon the hull and utilize the remaining functional equipment in other boats.

³⁶ *Buffalo Whig* 23 September 1834, 3:2 (MHGLC 2010).

³⁷ *Buffalo Whig* 27 May 1835; *Buffalo Commercial Advertiser* 30 May 1835, 2:3; *Buffalo Daily Star* 28 March 1835 (MHGLC 2010).

³⁸ Morrison 1903, 368; Gerstner 1997, 416.

³⁹ Table 1.

⁴⁰ *National Daily Pilot* [Buffalo, NY] 29 April 1845 (MHGLC 2010).

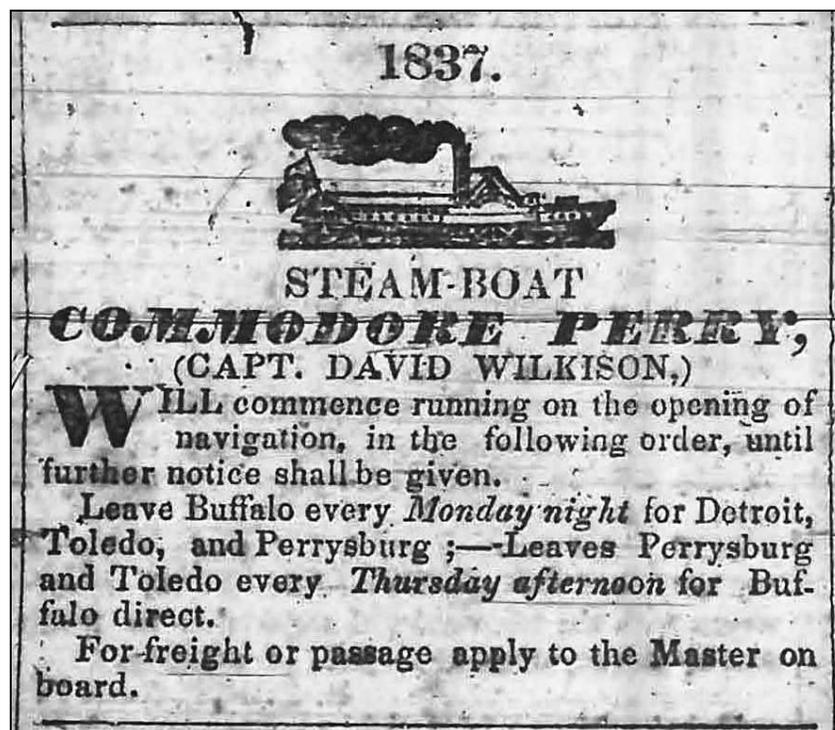


Figure 4: Advertisement for the steamboat *Oliver Hazard Perry*. (*Toledo Blade* 16 May 1837, 4)

Anthony Wayne- “A New and Elegant Steamboat”

Wanting to expand on the success of *Oliver Hazard Perry*, the same group of local businessmen that had built Perrysburg’s first steamer joined forces with other likeminded individuals to create the Perrysburg and Miami Steamboat Company. Helmed by John Hollister, associates included George C. Davies & Company of Cleveland, Ohio, M. Kingman & Company of Buffalo, NY, and other private citizens.⁴¹ It was decided that a new steamboat should be built at Perrysburg in order to meet the needs of the town and better participate in the ever-growing lake trade.

⁴¹ *Buffalo Commercial Advertiser* 13 March 1838, 3.

Construction of this new vessel commenced in the fall of 1836 at the wharf of John H. Hollister & Company under the direction of shipbuilder Samuel L. Hubbell.⁴² Little is known of Hubbell aside from his shipbuilding endeavors in northwestern Ohio.⁴³ The earliest project that can potentially be traced to him is the schooner *Antelope*. Constructed during the 1828 – 1829 season at Perrysburg, this vessel was built by “Pratt and Hubbell.”⁴⁴ The new steamboat, eventually dubbed *Anthony Wayne*, was the first recorded collaboration between Hubbell and John Hollister, but it was not the last. Over the next several years, the pair built three other side-wheelers, *General Vance* (1838), *St. Louis* (1844), and *Princeton* (1845), in addition to one propeller, *Samson* (1843) (Table 5).

Table 5: Vessels Built by Samuel L. Hubbell.⁴⁵

Vessel	Type	Tonnage	Built
<i>Antelope</i>	Schooner	53	1828
<i>Anthony Wayne</i>	Side-wheel Steamboat	390	1837
<i>General Vance</i>	Side-wheel Steamboat	76	1838
<i>Wabash</i>	Side-wheel Steamboat	83	1838
<i>John Marshall</i>	Side-wheel Steamboat	51	1839
<i>Samson</i>	Propeller Steamboat	250	1843
<i>St. Louis</i>	Side-wheel Steamboat	618	1844
<i>Princeton</i>	Propeller Steamboat	455	1845

⁴² *Cleveland Weekly Advertiser* 8 December 1836, 1:7.

⁴³ First mention of him comes from an 1823 Maumee Valley grave robbing incident in which he was one of the citizens involved in the ensuing investigation (Waggoner 1888, 564).

⁴⁴ Waggoner 1888, 438. While first names are lacking, there is reason to believe this is Samuel Hubbell based on later known ties with Amos Pratt.

⁴⁵ Appx. A.

Table 5. Continued.

Vessel	Type	Tonnage	Built
<i>Superior</i>	Side-wheel Steamboat	567	1845
<i>Globe</i>	Propeller Steamboat	313	1846

Construction of the steamboat's hull continued through the spring of 1837. The hull was intended to measure approximately 152 ft. (46.33 m) on deck, 25 ft. (7.62 m) in beam, and 10 ft. (3.05 m) depth of hold, with a burthen of about 400 tons.⁴⁶ Local oak likely comprised the majority of the hull, although no formal records of construction material survive. The newspaper *Miami of the Lake* later had this to say specifically of the wood: "The very timber of which she is built, grew up on the soil once defended by the individual whose name she proudly bears, and many of the sturdy oaks which now compose her hull, doubtlessly have been invigorated by the life blood, both of savage and civilized man, in the early history of our valley."⁴⁷ Vast hardwood forests sprawled throughout the northwestern Ohio region during the early nineteenth century, so it comes as no surprise that shipbuilders drew from these readily available resources.

With construction of the hull underway, a steam engine was needed to bring the steamboat to life. To this end, the machinists at Cleveland-based Hathaway and Company were contracted to provide the machinery.⁴⁸ The vessel was outfitted with a

⁴⁶ *Cleveland Weekly Advertiser* 8 December 1836, 1:7; *Cleveland Daily Herald & Gazette* 22 May 1837, 2:3.

⁴⁷ *Buffalo Commercial Advertiser* 30 August 1837.

⁴⁸ *Cleveland Weekly Advertiser* 8 December 1836, 1:7.; Heyl 1956, 99. Specific information on this company is lacking and all that is known is that they also furnished the steamer *Rochester* with its engine in 1838. TBNMSC indicates *Rochester's* engine was supplied by S. Hathaway of Cleveland, OH. This could possibly be the same person named in Hathaway and Company, although this cannot be certain. A gentleman did exist by the name of Samuel Hathaway, a lakes engineer who served as first engineer

high pressure square engine capable of producing 120 horsepower.⁴⁹ At a cost of \$18,000⁵⁰ and considered “one of Hathaway’s most powerful engines,”⁵¹ the engine’s cylinder measured 2 ft. 4 in. (68.58 cm) in diameter and had a stroke of 3 ft. (91.44 cm).⁵² The engine weighed 140 tons, which consequently caused the vessel to submerge an additional 2 ft. (60.90 m) in the water.⁵³ In total, the massive engine took up 50 ft. (15.24 m) on deck and 16 ft. (4.88 m) in the steamer’s hold.⁵⁴ Unfortunately, information pertaining to the steamer’s boilers and associated machinery has not yet been located, but it is known that the boiler’s firebox consumed 40 cords of wood in a 24-hour period.⁵⁵

Square steam engines were nothing new on the Great Lakes, but enjoyed a relatively short period of popularity. The configuration of this particular type of engine, also known as a crosshead engine, is described by Ward as “having the cylinder to stand over the paddle wheel shaft, with two cranks, one on each side of the cylinder, and two connecting rods from the cross head to the cranks, working one on each side of the cylinder.”⁵⁶ In other words, the cylinder was mounted vertically over the paddle wheel drive shafts, with the end of the piston attached to a horizontal crosshead (Fig. 5). In turn, the crosshead, which was mounted and supported at the apex of a large wooden and

aboard the steamer *Baltic* and a self-described ‘Constructor of Engines’ (Whittaker 1855, 54; *Detroit Free Press* 21 January 1858).

⁴⁹ TBNMSC 2010; Heyl 1956, 99. Mansfield (1899, 399) states that the engine was low pressure.

⁵⁰ *Milwaukee Sentinel* 8 March 1843, 2.

⁵¹ *Cleveland Weekly Advertiser* 8 December 1836, 1:7.

⁵² Heyl 1956, 99.

⁵³ *Milwaukee Sentinel* 8 March 1843, 2.

⁵⁴ *Milwaukee Sentinel* 8 March 1843, 2.

⁵⁵ *Milwaukee Sentinel* 8 March 1843, 2.

⁵⁶ Ward 1864, 60.

iron A-frame, was attached to two connecting rods running down either side of the cylinder. These rods were fastened to large iron cranks connected to the inboard end of each drive shaft, thereby converting reciprocal up and down motion into rotational movement. The system of connecting rods attached to the piston, while in motion, has been described as, “a pair of crutches under a lame man.”⁵⁷ While vertically mounted engines enjoyed success on the lakes, especially walking beam engines, square engines were all but abandoned by the second half of the 19th century due to stability issues related to the cylinder being mounted above the drive shafts.⁵⁸

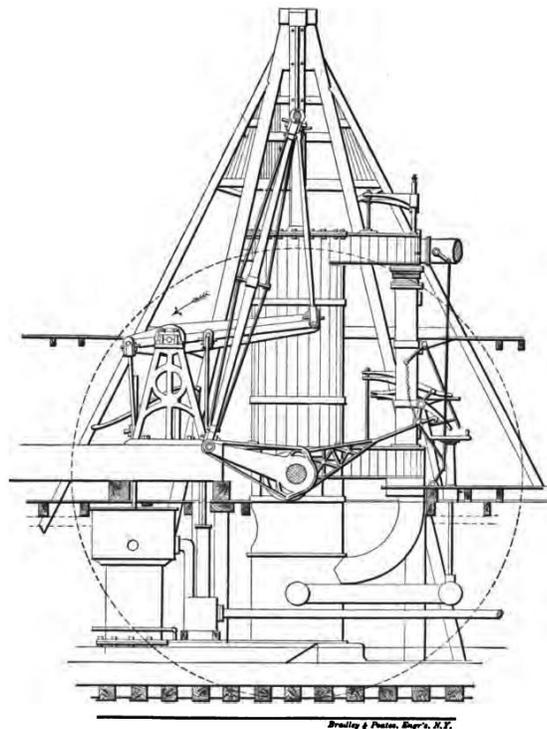


Figure 5: Configuration of a square steam engine. (Hutton 1897, 25)

⁵⁷ Mansfield 1899, 400.

⁵⁸ Mansfield 1899, 399; Harvey 2005, 55.

Hathaway's square engine powered the new steamer's two large side-mounted paddle wheels, the vessel's principal propulsion mechanism. Side-wheelers, more commonly referred to as steamers, were the primary type of steam-powered vessel on the Great Lakes in the 1830s, easily eclipsing the handful of stern-wheel steamboats that were built for adjacent rivers and canals.⁵⁹ The new boat's paddle wheels were 28 ft. (8.53 m) in diameter, larger than the total beam of the hull.⁶⁰ In order to achieve the maximum efficiency with the side-wheels, the paddles, also known as buckets or floats, were immersed just below the surface of the water when the vessel was laden to its load draft.⁶¹ This yielded the fastest speeds, but also carried with it obvious drawbacks. When the steamboat was under-laden, the buckets could not be immersed far enough down into the water for optimal performance and thus the vessel traveled slower than normal.⁶² A similar problem was encountered when the side-wheeler was over-laden, as the buckets would be submerged much too far down, causing increased resistance that resulted in slower speeds.⁶³ Despite the potential drawbacks, side-wheel steamboats dominated the Great Lakes steam traffic in the 1830s and 1840s, due to their large carrying capacities and fast speeds, and continued to be built up through the early 20th century.

When finished, the steamboat came close to the intended dimensions, measuring 156 ft. 6 in. (47.7 m) in length, 25 ft. 9 in. (7.85 m) in beam, and 10 ft. 10 in. (3.3 m)

⁵⁹ Appx. A.

⁶⁰ Heyl 1956, 99.

⁶¹ Musham 1957, 90.

⁶² Musham 1957, 90.

⁶³ Musham 1957, 90.

depth of hold when it was enrolled in Buffalo the following year.⁶⁴ The vessel was recorded as being 390 46/95 tons.⁶⁵

The overall cost of construction was reported as \$70,000, “as economical in her construction as any.”⁶⁶ This total includes the cost of the engine, stated earlier, bringing the actual construction of the ship itself to just \$52,000. Unfortunately, this amount is not broken down further, so further inferences regarding costs are all but impossible. This total was no small sum in the late 1830s, but the ability of the Perrysburg and Miami Steamboat Company to generate such substantial funds speaks of the economic stability and resilience of the town.⁶⁷ As stated by a local newspaper, “The building of this steamboat at the present time, when the resources of the country are emphatically locked up, is the strongest evidence that probably can be given of the healthy state of the prosperity of Perrysburg.”⁶⁸

In May of 1837 Perrysburg and Miami Steamboat Company’s vessel was ready for launch. The *Cleveland Daily Herald & Gazette* states the steamboat “was to have been launched on Saturday,” 20 May 1837, but the event seems to have been postponed.⁶⁹ A later article from the *Buffalo Daily Commercial Advertiser* tells us that Hollister’s new steamboat was launched in Perrysburg on 26 May 1837.⁷⁰

⁶⁴ 1838 Enrollment (Appx B).

⁶⁵ These measurements are taken from the *Anthony Wayne*’s 1838 enrollment at Buffalo, NY, the earliest surviving enrollment documentation for the vessel. However, this enrollment references an earlier enrollment dating to 1837 from Miami, OH. This older enrollment has yet to be found.

⁶⁶ *Milwaukee Sentinel* 8 March 1843, 2.

⁶⁷ MacGrane (1965, 124-5) quotes the 1839 governor of Ohio for providing reasons why that state did not suffer as much as the rest of the Union during the Panic of 1837, stating, “we are more an agricultural, than a manufacturing or commercial people; and, comparatively speaking, but little in debt.”

⁶⁸ *Miami of the Lake* (in *Cleveland Weekly Advertiser* 8 December 1836, 1:7).

⁶⁹ *Cleveland Daily Herald & Gazette* 22 May 1837, 2:3 (MHGLC 2010).

⁷⁰ *Buffalo Daily Commercial Advertiser* 6 June 1837.

The owners christened their new steamer *The Representative*. No reason has yet to be uncovered as to why this name was chosen, but it can be presumed that the steamboat was to represent both the people and interests of Perrysburg in the ever-increasing arena of Great Lakes shipping. While the vessel itself was to enjoy a relatively long career, its original name was very short lived. Local residents were not particularly fond of the name *The Representative*, believing it to have “a most vapid and unmeaning sound”.⁷¹ The steamboat owners eventually agreed with the sentiments of the people and chose a stronger, more personal name, one that would better characterize the vessel. It is not known when the change formally took place, but advertisements for the steamer in June 1837 list the name as *Anthony Wayne*.⁷²

Drawing inspiration from the very battlefield where the hull’s timber originated, the decision was made to rename the steamboat *Anthony Wayne* in honor of the late 18th-century American general who overcame overwhelming odds at the Battle at Fallen Timbers in 1794. Soon after the official name change, the steamer informally adopted the nickname *Mad Anthony*, the same moniker enjoyed by the tenacious war hero. Many citizens unfamiliar with the military history of the region and did not know who or what *Mad Anthony* was.⁷³ To remedy this and invoke a more vivid charter, the nickname was transformed slightly to become *General Wayne*.⁷⁴ Despite these nicknames, used on and off throughout the following years, the vessel’s official name remained *Anthony Wayne* and never changed through the entirety of its career.

⁷¹ *Toledo Blade* 15 August 1837, 3.

⁷² *Toledo Blade* 6 June 1837, 3.

⁷³ *Cleveland Daily Herald & Gazette* 4 April 1838, 2:4 (MHGLC 2010).

⁷⁴ *Cleveland Daily Herald & Gazette* 4 April 1838, 2:4 (MHGLC 2010).

Original plans and drafts of the vessel do not survive, so what the steamboat looked like at the time of its launching cannot be accurately reconstructed. Newspaper accounts describe the newly built *Anthony Wayne* as “elegant” and “fine” in appearance, as well as being “a staunch, trim, lake boat.”⁷⁵ The 1838 vessel enrollment mentions that it had three decks, carried one mast, had a scroll type figurehead, and lacked any sort of stern gallery.⁷⁶ This information is corroborated, to some degree, by a wood-cut of the steamboat created in 1838 (Fig. 6). The most obvious discrepancy is the inclusion of both fore and main masts, but aside from that most other features agree with historic descriptions: the towering A-frame of the square engine, enormous paddle wheels, three decks, and the lack of any noticeable gallery.⁷⁷ This is the only contemporary depiction of *Anthony Wayne*, and while some elements are erroneous, the image does allow a glimpse back in time to what the vessel may have looked like.

⁷⁵ *Cleveland Daily Herald & Gazette* 23 August 1837, 2:2 (MHGLC 2010); *Buffalo Commercial Advertiser* 30 August 1837 (MHGLC 2010).

⁷⁶ 1838 Enrollment (Appx. B)

⁷⁷ The 1838 enrollment and every enrollment thereafter (Appx. B) state *Anthony Wayne* carried a single mast.

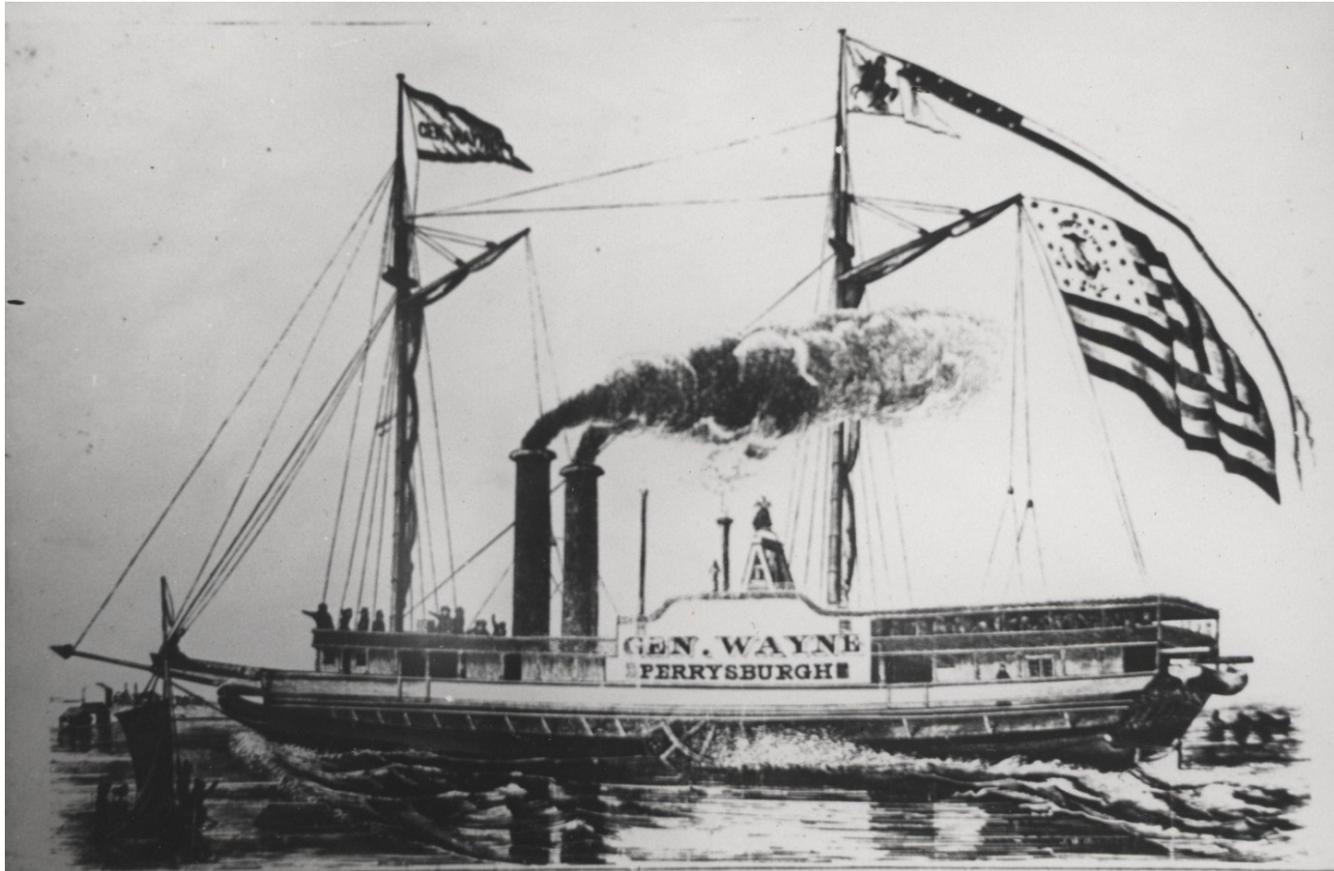


Figure 6: 1838 wood-cut of steamboat *Anthony Wayne*. (Courtesy of the Clarence S. Metcalf Great Lakes Maritime Research Library, Great Lakes Historical Society, Vermilion, Ohio.)⁷⁸

⁷⁸ This image also appears in Musham 1958, Pl. 17, and is credited to Mariner's Museum, Newport News, Virginia.

CHAPTER III

THE OPERATIONAL HISTORY OF THE *ANTHONY WAYNE*1837 – 1842 Seasons

The side-wheel steamboat *Anthony Wayne* entered the arena of Great Lakes shipping in the second half of the 1837 season. An eyewitness of its arrival at the port of Toledo on 14 September 1837 stated, “She is a beautiful boat with accommodations fully equal to those of any other steamer on the Lake, and may well be cited by the citizens Perrysburg as a favorable specimen of the haste and skill of her builder, and a striking testimony to their own enterprise.”⁷⁹ The new steamer from the Perrysburg and Miami Steamboat Company was ready for business.

Stockholders intended for *Anthony Wayne* to be both a passenger and cargo carrier, and Hubbell built the steamboat accordingly. With increased western migration in the region during the 1830s, the need for capacious vessels rose significantly. Owners and shipbuilders had to find the correct balance between passenger accommodations and space for cargo. This meant that most passenger vessels were built with a large dormitory style gentlemen’s cabin, a separate ladies’ cabin, and, if space allowed, a handful of private staterooms. Cabin passage was more expensive, however, and many steamboat travelers opted for reduced fares by sleeping on deck or amongst the cargo.

⁷⁹ *Toledo Blade* 15 August 1837, 3.

Since passenger transportation was *Anthony Wayne*'s primary function, its builders made every effort to offer numerous, comfortable, and luxurious accommodations for travelers. It was therefore fitted with the following passenger quarters: "52 berths in the gentleman's state rooms, and 30 in the ladies cabin, in addition to 10 gentlemen's state rooms, each containing 3 berths."⁸⁰ Additionally, it is said that, "the ladies' cabin is finished with state rooms, a pleasant air saloon extending through the centre."⁸¹ From these figures the number of cabin passengers *Anthony Wayne* could lodge was 112. The total number of passengers the steamer could carry was likely much higher as deck passengers are not represented in this figure. Deck passage is difficult to calculate, as the steamboat's officers likely tried to maximize profits by carrying as many travelers as possible.

In addition to transporting passengers throughout the lakes, *Anthony Wayne* also served as a cargo carrier. Goods and freight intended for far away markets would be packaged into barrels, crates, bushels, sacks, or other containers, and usually placed in the hold of the ship. According to newspaper articles from 1837, *Anthony Wayne* had a capacity for 1,500 barrels of freight below decks.⁸² Barrels during this period tended to be a standard size in the United States, 2 ft. 4 in. (71.12 cm) in length by 1 ft. 5 in. (43.18 cm) head diameter and could hold a weight of approximately 200 lbs. (90.72 kg).⁸³ Given these measurements, *Anthony Wayne* could therefore carry up to 150 tons

⁸⁰ *Cleveland Daily Herald & Gazette* 23 August 1837, 2:2 (MHGLC 2010).

⁸¹ *Cleveland Daily Herald & Gazette* 23 August 1837, 2:2 (MHGLC 2010).

⁸² *Cleveland Daily Herald & Gazette* 23 August 1837, 2:2 (MHGLC 2010).

⁸³ Nina Chick, personal communication 2011. Flour barrels from the 1830s were recorded as being 2 ft. 3 in. (68.58 cm) long and 196 lbs. in weight, while pork barrels were 2 ft. 5 in. (73.66 cm) long and 200 lbs. in weight.

of cargo. This number contradicts an article published in 1843 that references a carrying capacity of 250 tons, equaling 2,500 barrels.⁸⁴ It should be noted that the larger carrying capacity does not specifically stipulate where this cargo was to be stored, and it is possible that the extra 100 tons could have been housed on the main deck. Larger or more bulky cargo that would not fit easily in the hold, such as livestock or long pieces of lumber, would likely be stowed here, making the best use of all available space on the steamer for the purposes of increasing revenue.

This expensive investment was entrusted to a skillful and seasoned captain, Amos Pratt, whose job it was to make the steamer a lucrative venture.⁸⁵ Although never explicitly stated on enrollment documentation, Pratt has been referred to as a shareholder in the vessel's stock.⁸⁶ This is quite probably, as Pratt, Hubbell, and the Hollisters built several vessels together after *Anthony Wayne*.⁸⁷ Not much is known of Pratt's early days on the lakes and first mention of him in local newspapers comes from the building of *Anthony Wayne*. While still under construction, the *Black Rock Advocate* states the new steamer "will be commanded by A. Pratt, late of the steamboat *Oliver Newberry*," also a Lake Erie vessel.⁸⁸ During his time on both *Oliver Newberry* and *Anthony Wayne*, Pratt received much praise for his role and conduct as a steamboat master, and was described as "prominent lake navigator," "skilled seaman," and "gentlemanly officer."⁸⁹

⁸⁴ *Milwaukee Sentinel* 8 March 1843, 2.

⁸⁵ *Cleveland Weekly Advertiser* 8 December 1836, 2:7. Beers (1897, 656) states Amos was the son of General William and Bethia Pratt, one of seven siblings (Jonas, William, Hiram, Sarah, Jane, and Benjamin) born to this couple and the only one to later enter into a maritime career.

⁸⁶ *Marine Record* [Cleveland, OH] 15 October 1885, 2.

⁸⁷ Appx. A.

⁸⁸ *Black Rock* [NY] *Advocate* 2 December 1836, 3.

⁸⁹ *Cleveland Weekly Advertiser* 8 December 1836, 1:7; Palmer 1906, 36; Mauer 1943, 166.

Soon after *Anthony Wayne* was launched, or possibly even before, it was decided by the owners that the steamer would cooperate with the Western Transportation Company, providing daily service from New York to the western states.⁹⁰ By consolidating several smaller businesses, the Western Transportation Company intended to provide reliable, affordable and expeditious transportation services from New York City to the western states via the Hudson River, Erie Canal, and Upper Lakes. The Upper Lakes steamboats involved in the 1837 arrangement included *Wisconsin*, *Thomas Jefferson*, *Constitution*, *James Madison*, *Rhode Island*, *Columbus*, *Buffalo*, *Oliver Hazard Perry*, *Vermillion*, and *Anthony Wayne*.⁹¹ These steamers revolutionized the shipping industry of the Great Lakes by providing daily, scheduled services to the major ports along Lake Erie, and extended this practice further into Lakes Huron and Michigan.

Anthony Wayne was assigned to the daily Express Line with service from Detroit to Buffalo. The new side-wheel steamer formally began its career on 18 August 1837 when it departed Perrysburg and headed up the Maumee River for Toledo.⁹² *Anthony Wayne* stayed in port at Toledo for four days before setting out for Buffalo on 21 August 1837.⁹³ The steamboat stopped at all intermediate ports along the southern Lake Erie shore, including Sandusky, Cleveland, Ashtabula, and Erie. Two days into its maiden

⁹⁰ The Western Transportation Company formed in 1838 by combining the Commercial, the Transportation, and the Telegraph shipping lines on the Erie Canal, and operating them in conjunction with several steamboats primarily on Lake Erie (*Toledo Blade* 6 June 1837, 3; *Buffalo Commercial Advertiser* 1 February 1838, 2; Mauer 1943, 164-5).

⁹¹ *Toledo Blade* 6 June 1837, 3.

⁹² *Toledo Blade* 15 August 1837, 3.

⁹³ *Toledo Blade* 15 August 1837, 3.

voyage, the steamboat entered Cleveland, an event described by a local newspaper: “A new and elegant steamboat from Perrysburg, bearing the good name of Mad Anthony, and with a broad banner with the dying rally of the brave *Lawrence* ‘Don’t give up the ship,’ came into our port this morning.”⁹⁴ It is unknown exactly how long *Anthony Wayne* stayed in Cleveland, or when the ship made it to Buffalo, but it returned to Toledo on 8 September 1837 before heading on to Detroit the same day.⁹⁵ The new side-wheeler continued on this route through the remainder of the 1837 season, which concluded at the end of October.⁹⁶

In 1838, *Anthony Wayne* enjoyed its first full year of operational service on the Great Lakes. Before the official start of the spring shipping season, the Western Transportation Company announced its arrangement for the upcoming season starting in March of that year.⁹⁷ Managing officers within the company decided *Anthony Wayne* should run on Lake Erie servicing the Buffalo, Toledo, Perrysburg route.⁹⁸ Furthermore, *Anthony Wayne* and *Oliver Hazard Perry* were to operate alternatively between Buffalo and Perrysburg, both leaving port the same day and arriving at their destination three to four days later.⁹⁹ Running in this fashion, the Perrysburg steamers provided the lake shore with convenient and reliable transportation.

⁹⁴ *Cleveland Daily Herald & Gazette* 23 August 1837, 2:2.

⁹⁵ *Toledo Blade* 5 September 1837, 3.

⁹⁶ *Toledo Blade* (17 October 1837, 3) states *Anthony Wayne* departed Toledo for Detroit on 24 October, but no other arrival or departure information for the vessel has been discovered for the remainder of 1837.

⁹⁷ *Buffalo Commercial Advertiser* (26 March 1838) states that Lake Erie was clear of ice as of that date and arrivals should be expected soon. The start of the shipping season was ultimately determined by the amount of ice covering Lake Erie and whether vessels could safely pass through. On average, the end of March or beginning of April usually saw the start of the regular season, but this was by no means true for all years.

⁹⁸ *Cleveland Daily Herald & Gazette* 12 March 1838, 2:6.

⁹⁹ *Buffalo Commercial Advertiser* 13 March 1838, 3.

Preparations commenced in the spring to get *Anthony Wayne* into prime shape for the upcoming season. It is reported that the steamer underwent refitting at this time, but specific details are lacking.¹⁰⁰ An 1838 advertisement reveals that some improvements came from creating additional passenger accommodations. The advertisement states the steamboat featured, “twenty state rooms, and a gentlemen’s cabin with fifty-two berths; also a ladies’ steerage cabin with twelve berths, and a gentlemen’s steerage cabin with 24 berths.”¹⁰¹ When compared to the 1837 listing of passenger accommodations, it can be seen that the steerage quarters are now listed, a marketing strategy meant to appeal to the less affluent traveler. Another advertisement from the same year states that *Anthony Wayne* could “accommodate 200 cabin passengers with berths and state-rooms,” a significantly higher total than the 112 calculated for the previous season.¹⁰²

Anthony Wayne’s first trip of the spring was in late March or early April, as the steamer came into Toledo from Cleveland on 4 April 1838.¹⁰³ Owners and managers of the vessel published an advertisement that ran all year, which included its proposed schedule for the season (Fig. 7). In total, *Anthony Wayne* was to make 68 trips from Buffalo to Toledo, weather permitting, making the round trip in six days.

¹⁰⁰ *Cleveland Daily Herald & Gazette* 4 April 1838, 2:4.

¹⁰¹ *Buffalo Commercial Advertiser* 13 March 1838, 3.

¹⁰² *Buffalo Commercial Advertiser* 28 May 1838, 3.

¹⁰³ *Toledo Blade* 18 April 1838, 3.

1838.—PERRYSBURG AND BUFFALO DAILY LINE OF STEAMBOATS.—

THE Steamboat ANTHONY WAYNE, ANOS PRATT, Master,
 will make her regular trips (weather permitting), in the following order:

<i>Leaves Perrysburg and Toledo for Buffalo.</i>		<i>Leaves Buffalo for Toledo and Perrysburg.</i>	
Thursday, May	3	Sunday, May	6
Wednesday, do	9	Saturday, do	12
Tuesday, do	15	Friday, do	18
Monday, do	21	Thursday, do	24
Sunday, do	27	Wednesday, do	30
Saturday, June	5	Tuesday, June	5
Friday, do	11	Monday, do	11
Thursday, do	14	Sunday, do	17
Wednesday, do	20	Saturday, do	23
Tuesday, do	26	Friday, do	29
Monday, July	2	Thursday, July	5
Sunday, do	8	Wednesday, do	11
Saturday, do	14	Tuesday, do	17
Friday, do	20	Monday, do	23
Thursday, do	26	Sunday, do	29
Wednesday, August	1	Saturday, August	4
Tuesday, do	7	Friday, do	10
Monday, do	13	Thursday, do	16
Sunday, do	19	Wednesday, do	22
Saturday, do	25	Tuesday, do	28
Friday, do	31	Monday, September	3
Thursday, Sept'r.	6	Sunday, do	9
Wednesday, do	12	Saturday, do	15
Tuesday, do	18	Friday, do	21
Monday, do	24	Thursday, do	27
Sunday, do	30	Wednesday, October	3
Saturday, October	6	Tuesday, do	9
Friday, do	12	Monday, do	15
Thursday, do	18	Sunday, do	21
Wednesday, do	24	Saturday, do	27
Tuesday, do	30	Friday, November	3
Monday, November	5	Thursday, do	9
Sunday, do	11	Wednesday, do	14
Saturday, do	17	Tuesday, do	20

The ANTHONY WAYNE is 400 tons burthen, new and well built, with twenty state-rooms, and a gentlemen's cabin with fifty two berths; also a ladies' steerage cabin with twelve berths, and a gentlemen's steerage cabin with twenty four berths; which makes her accommodations equal to any boat on the lake. She will always leave Perrysburg and Toledo on the arrival of the cars from Adrian.

The Steamboat Anthony Wayne will leave Perrysburg on the same day that the Commodore Perry leaves Buffalo, and run alternately, agreeable to this advertisement. Arrangements have been made with four first class steamboats, to run in connexion with the above boats to form a six day line between Perrysburg and Buffalo.

AGENTS.
JOHN HOLLISTER & CO. Perrysburg.
GEORGE C. DAVIES & CO. Cleveland.
M. KINGMAN & CO. Buffalo.

mar 12 nov 20

Figure 7: Anthony Wayne's 1838 schedule. (*Buffalo Commercial Advertiser* 1 May 1838,

Anthony Wayne enjoyed much success during the 1838 shipping year. In May, a notice reported in the *Miami of the Lake* talked of the great speed and efficiency of the boat, in which goods shipped from New York City to Toledo, a distance of 875 miles (1,409 km), safely found their way to that city via *Anthony Wayne* eight days after they had been shipped.¹⁰⁴ The newspapers state, “Such dispatch a few years since, would have been thought impossible, but so perfect are the arrangements of our forwarding merchants, and so great their facilities, that eight days from New York to the head of Lake Erie, will in a short time be considered nothing unusual.”¹⁰⁵ In this fashion, *Anthony Wayne* quickly began building a sound reputation for itself amongst Great Lakes steamers.

Despite initial successes, the managing officers of *Anthony Wayne* decided not to confine the side-wheeler solely to the waters of Lake Erie. In late May, it was announced that Captain Pratt would pass through Lakes Huron and Michigan, bound for Chicago, making at least two trips to that city in the month of June.¹⁰⁶ Two other Western Transportation Company steamers, *James Madison* and *Thomas Jefferson*, already operated on these waters, but the owners deemed it necessary for *Anthony Wayne* to provide added coverage to this region.¹⁰⁷ The steamer was scheduled to leave Buffalo and touch at all intermediate ports along the way. Officers took great care to ensure a pleasant and entertaining experience for passengers, which included having a “band of

¹⁰⁴ *Buffalo Commercial Advertiser* 21 May 1838, 2.

¹⁰⁵ *Buffalo Commercial Advertiser* 21 May 1838, 2.

¹⁰⁶ *Buffalo Commercial Advertiser* 28 May 1838, 3; *Buffalo Commercial Advertiser* 4 June 1838, 3.

¹⁰⁷ *Cleveland Daily Herald & Gazette* Advertisement 12 March 1838, 2:6.

music” on board and noting “no pains will be spared to make passengers comfortable during the voyage.”¹⁰⁸ The trips to Chicago proved to be quite successful, as a card published in the *Milwaukee Sentinel* proves. The card, signed by 48 persons, reads:

We the undersigned, passengers in the Steam Boat *General Wayne*, from her late trip from Buffalo to this place, tender to Capt. Pratt, and to the other officers of the boat, and also to Mr. Davis, of the Saloon, our sincere thanks for their kind and gentlemanly attention to us during the passage, and we take pleasure in recommending the *Gen'l Wayne* to the traveling public, as a superior sea Boat, combining speed, elegance, comfort, and convenience.¹⁰⁹

Anthony Wayne made at least three trips to Chicago and four trips to Mackinac, Michigan during 1838 season, laden with passengers, merchandise, and other freight.¹¹⁰ A Cleveland newspaper noted that on one trip to Chicago in August *Anthony Wayne* was in port receiving “larger freight and more passengers,” and expected to leave “pretty full.”¹¹¹ These accounts show that the steamer had gained favorable public opinion in a relatively short amount of time.

Unfortunately for *Anthony Wayne*, however, not all press received that year proved positive. It was reported in the latter half of July 1838 that *Anthony Wayne* and another steamer, *Milwaukie*, engaged in a steamboat race on their way to Buffalo.

¹⁰⁸ *Buffalo Commercial Advertiser* 28 May 1838, 3.

¹⁰⁹ *Milwaukee Sentinel* 8 June 1838, 3.

¹¹⁰ *Buffalo Commercial Advertiser* (1838) lists the arrival and departure information, as well as cargo carried, for all vessels coming into Buffalo’s port on a daily basis.

¹¹¹ *Cleveland Daily Herald & Gazette* 29 August 1838, 2:1.

Steamboat racing, a 19th-century phenomenon that pitted two vessels in a head-to-head race, had both positive and negative consequences. On one side, racing allowed a steamboat the opportunity to show off just what kind of power the engine could produce, as well as the skill and mastery of its captain. Winning a race yielded bragging rights, which could be used as a marketing tool when trying to convince passengers to travel aboard that ship, as well as potentially gaining more ticket sales from merely being first in dock. On the other hand, racing came with several dangerous consequences. First and foremost, if a steamer's engine was pushed too hard, the boilers ran the risk of exploding, potentially causing fatal injury to the machinery, ship, and, most importantly, the passengers and crew. With so much attention being paid to the speed of the vessel, other aspects of navigation could be carelessly missed, such as coming too close to other vessels, or not noticing sandbars or other grounding hazards.

Steamboat racing on the Great Lakes was not a common event, for the public held a very poor opinion of the sport. Such opinion is evidenced by a newspaper article on the *Anthony Wayne* incident. Both ships, crowded with passengers from Cleveland, raced out of that port with all possible speed and continued on in that fashion all the way to Buffalo.¹¹² The newspaper article thoroughly chastised the captains of each boat for endangering the lives of their passengers, stating, "when steamboat captains show themselves so regardless of public opinion and law, so willing to jeopard [sic] human life by racing, they should be made to feel in their pockets, if nothing else will touch

¹¹² *Buffalo Commercial Advertiser & Journal* 27 July 1838, 2.

them.”¹¹³ The article goes on to say that while both vessels offer excellent accommodations, racing of any kind is hazardous and inexcusable, and the public should be mindful to stay away from such boats. The scathing article must have had some effect, as this racing incident is the only one noted in *Anthony Wayne*'s career.

The 1838 season proceeded without much further incident. In October, while making a run to Lake Michigan, *Anthony Wayne* encountered a violent gale that battered the steamer out upon the lake for several days.¹¹⁴ The incident severely weakened one passenger, Judge William C. Frazer of Delaware, who later died in Milwaukee reportedly from a combination of sea-sickness and fatigue. Neither the steamer nor its captain bore any responsibility for the unfortunate occurrence, and continued on with the season until the end of November.¹¹⁵

During the off-season, managing officers decided to make additional improvements to the steamer that would make it significantly more commodious and comfortable than other vessels on the lakes. In the spring of 1839, the steamer is reported as, “having a very large gentleman’s cabin built upon the hurricane deck, containing 103 berths. The cabin heretofore used by the cabin passengers will be used for the benefit and convenience of steerage passengers, which is an advantage and a luxury which no other boat to our knowledge, on Lake Erie furnishes.”¹¹⁶

¹¹³ *Buffalo Commercial Advertiser & Journal* 27 July 1838, 2.

¹¹⁴ *Milwaukee Sentinel* 23 October 1838, 2.

¹¹⁵ *Buffalo Commercial Advertiser* (26 November 1838, 2) states the navigation season ended early this year on account of ice build-up on both the lakes and canals.

¹¹⁶ *Toledo Blade* 27 March 1839, 2.

The first Great Lakes steamer built with staterooms on the upper deck, also known as the hurricane deck, was the 780 ton *Great Western*, built at Huron, Ohio in 1838.¹¹⁷ The addition of a complete cabin on the upper deck served two purposes. First, it allowed for the creation of more passenger state rooms, which, in turn, meant more money for the stockholders. Secondly, and arguably as important, the added weight of this cabin made the steamer “run more steadily in a storm,” a feature that could also be used as a selling point with the traveling public.¹¹⁸ Initially, this design concept was unnerving as it was thought additional cabins would negatively affect the stability and seaworthiness of vessel.¹¹⁹ This notion was soon dispelled by trusted lake veterans, and upper deck cabins quickly became a staple of Great Lakes steamers.

Anthony Wayne's 1838 enrollment documents state that Hubbell built the vessel with three decks, but most likely the upper deck held, “between the wheel houses... a few rooms used for smoking rooms and card playing,” not passenger state rooms.¹²⁰ After renovations were completed in 1839, *Anthony Wayne* had, “state rooms for 85 passengers, and berths in the gentlemens cabin which gives accommodation for near 200 passengers. She has three steerage cabins for deck passengers, and her accommodations are equal, if not superior to any boat in the Upper Lake trade.”¹²¹ Already noted for its

¹¹⁷ *Buffalo Commercial Advertiser* 11 May 1839, 2.

¹¹⁸ Mansfield 1899, 399.

¹¹⁹ Musham (1958, 291) recounts the difficulty *Great Western* had early in its career specifically regarding public opinion of the upper deck cabins.

¹²⁰ Morrison 1903, 369. Hurlbut (1881, 214) credits *Anthony Wayne* as being “partially the first” steamboat with an upper deck cabin, which is consistent with Musham (1958, 288) who states the steamer only had a partial upper cabin.

¹²¹ *Toledo Blade* 7 August 1839, 3.

speed and the skill of its officers, the improvements made to *Anthony Wayne* further enhanced public perception of the vessel as one of the most popular on the lakes.¹²²

Expeditious travel was the name of the game for *Anthony Wayne* and other steamboats in the Western Transportation Company during the 1839 navigation season. An article from the *Toledo Blade* delighted over the speediness with which passengers could travel from Toledo to New York City, citing a total of 87 hours by way of steamboat, stage coach, and railroad.¹²³ More specifically, individuals going from Toledo to Buffalo could reach their destination in 39 hours by steamboat.¹²⁴ Heading further up into the lakes also proved easy for these tireless steamers. The *Daily Chicago American* reported an impressive display of speed when *Anthony Wayne* made the trip from Buffalo to Chicago in approximately 85 hours including stoppages, a feat not many steamboats had previously accomplished.¹²⁵ Steamers arriving on time or even before schedule earned a reputation for being fast and were likely to receive more business from passengers and merchants. Much like today, time equaled money in the world of Great Lakes shipping, and *Anthony Wayne* proved that it could rival any other steamboat operating on the lakes at that time.

Profits combined with a robust customer base kept the steamers running strong through the 1839 navigation season. In fact, the total value of all steamboats operating

¹²² *Toledo Blade* 27 March 1839, 2.

¹²³ *Toledo Blade* 17 July 1839, 2.

¹²⁴ *Toledo Blade* 17 July 1839, 2.

¹²⁵ *Daily Chicago American* 22 June 1839 (in Musham 1958, 290-1). Musham calculates the speed of *Anthony Wayne* as 13 mph (20.921 kph) based on distance traveled, 959 mi (1,503.361 km), and the time it took to run that route, 85 hrs.

on the Upper Lakes in that year equaled \$1,741,200.¹²⁶ With so much capital being invested in the construction of large passenger steamers and newer, more elaborate vessels being produced every year, stakeholders of such vessels worried that increased competition would force prices too low to net an acceptable profit.¹²⁷ In a move to ensure this did not happen, a Steamboat Combination formed on 1 June 1839 consisting of owners and agents from 30 separate steamboats.¹²⁸ An apparent revitalization of an earlier association of boat owners from 1836, the purpose of the Combination was to set prices for passenger and cargo transport, as well as regulate arrival and departure schedules for all steamboat service out of Buffalo, Detroit, Chicago, and intermediate ports.¹²⁹ Also referred to as the Consolidation and the Association, the Steamboat Combination made Buffalo the center of operations for its board of directors.¹³⁰ Franz Anton Ritter von Gerstner described the obligations and requirements of the Combination: “each boat represents a certain number of shares, determined by its size, age, and assessed value;” “all boats belonging to the association are used as equally possible;” “each boat owner remains responsible for all expenses for crew, fuel, repairs, and the like;” “the board of directors determines fares and freight charges, and all members of the association are required to observe the established tariff.”¹³¹

Additionally, not all steamboats in the Combination’s fleet were utilized at any one given time, since too many steamers running simultaneously would increase operating

¹²⁶ Gerstner 1997, 415.

¹²⁷ Gerstner (1997, 415) estimates that it cost \$50,000 to build a steamboat in 1839.

¹²⁸ Gerstner 1997, 421.

¹²⁹ Musham (1958, 289) cites the *Daily Chicago American* (6 June 1839) for this information.

¹³⁰ Gerstner 1997, 421.

¹³¹ Gerstner 1997, 421-2. See also Hilton 2002, 29-30.

costs and thereby reduce profits. As a result, out of the 30 steamboats that entered into the Combination, 13 were laid up in the 1839 season in order to meet scheduling demands while maximizing profit.¹³² The prices established by the Combination for both passenger and freight charges (Tables 6, 7) were calculated based on providing reliable daily service, rather than on the total number of steamers in the fleet. Upon returning to Buffalo after each trip, the agreement required participating steamboats to pay the Combination 15% of their gross revenues, which was totaled and used to pay its shareholders at the end of each month.¹³³ The Steamboat Combination existed throughout the 1840s, with its strength fluctuating from year to year, until it eventually collapsed by the end of the decade.¹³⁴ While active, however, the Combination had significant influence over lake shipping and steamboats.

Table 6: Passenger rates set by the Steamboat Combination, 1839.¹³⁵

Route	Cabin Fare	Steerage Fare
Buffalo to Cleveland	\$4.00	\$2.50
Buffalo to Detroit	\$8.00	\$3.00
Buffalo to Chicago	\$20.00	\$10.00
Detroit to Chicago	\$16.00	\$8.00

¹³² Gerstner 1997, 423.

¹³³ Gerstner 1997, 422.

¹³⁴ Hilton 2002, 30-1.

¹³⁵ Mansfield 1899, 187; Gerstner 1997, 420.

Table 7: Cargo rates set by the Steamboat Combination, 1839.¹³⁶

Route	Weight	Cost (per 100 lbs.)
Buffalo to Silver Creek, Dunkirk, Barcelona	Light	\$0.35
Buffalo to Silver Creek, Dunkirk, Barcelona	Heavy	\$0.25
Buffalo to Erie, Grand River, Cleveland	Light	\$0.40
Buffalo to Erie, Grand River, Cleveland	Heavy	\$0.27
Buffalo to Detroit	Light	\$0.46
Buffalo to Detroit	Heavy	\$0.30
Buffalo to Chicago	Light	\$0.87½
Buffalo to Chicago	Heavy	\$0.62½
Buffalo to Chicago	Barrel Bulk	\$1.50

When steamboat owners met in June to discuss the terms of the Steamboat Combination, agents for *Anthony Wayne* agreed to enter the arrangement. The Combination's board of directors decided that the side-wheeler would join six other steamers in the Buffalo to Chicago line.¹³⁷ Under the terms of this agreement, Pratt had 16 days to navigate *Anthony Wayne* from Buffalo to Chicago and back again, making several stops along the way for passengers and cargo.¹³⁸ To keep the line as regular and reliable as possible, a fine was imposed on all vessels that were unable to meet a scheduled trip.¹³⁹ There is no record of *Anthony Wayne* having missed any such trips or

¹³⁶ Mansfield 1899, 187; Gerstner 1997, 418.

¹³⁷ Musham 1858, 290.

¹³⁸ Gerstner 1997, 419.

¹³⁹ Gerstner 1997, 420-1.

being unexpectedly delayed for any length of time. The steamer did, however, encounter a severe gale off Dunkirk on 25 September 1839 in which a passenger sighted six water spouts, but the storm did not appear to affect the steamer's scheduled arrival.¹⁴⁰ *Anthony Wayne* continued on the Chicago route for the remainder of the 1839 season, diligently making the round trip twice a month, with its last reported run being in the end of October, at which point it was presumably put into winter lay-up.¹⁴¹

Working on the Chicago line required a great deal of fuel to keep *Anthony Wayne* running through the Upper Lakes. The majority of steamers operating on the lakes in the late 1830s still burned wood for fuel instead of coal, due to the abundance and affordability of firewood. *Anthony Wayne* reportedly consumed as many as 40 cords of wood in a 24-hour period.¹⁴² In addition to picking up passengers and freight at various stopping points between termini, officers and crew also made arrangement to resupply the ship with wood for the fireboxes heating the boilers. The going rate for a cord of wood in 1839 is stated as \$2.00, which meant *Anthony Wayne* would spend up to \$80 per day on fuel.¹⁴³ The side-wheeler could usually make the round trip from Buffalo to Chicago in 14 days, meaning total costs for fuel could equal upwards of \$1,220.00.¹⁴⁴ In 1841, several of these boats underwent conversions to allow the engines to burn coal

¹⁴⁰ *Buffalo Commercial Advertiser* 27 September 1839, 2.

¹⁴¹ *Buffalo Commercial Advertiser* 30 October 1839, 2.

¹⁴² *Milwaukee Sentinel* 8 March 1843, 2.

¹⁴³ Gerstner 1997, 420.

¹⁴⁴ Round trip time was calculated based on arrival and departure information reported in the Marine List of the *Buffalo Commercial Advertiser* (1839).

instead of wood.¹⁴⁵ If *Anthony Wayne* underwent such a conversion, it is not apparent in surviving records or schedules.

While the steamer worked hard during 1839, it was briefly employed in more enjoyable endeavors. At least once during that season *Anthony Wayne* took a break from its usual run to Chicago to offer the public a pleasure excursion to the Upper Lakes (Fig. 8). Trips such as this increased in popularity during the second quarter of the 19th century as more people had the means to travel as a form of recreation. *Anthony Wayne's* excursion commenced on 13 August 1839, with plans to stop at several ports on Lake Huron, at Mackinac, and to make a full counter-clockwise run around Lake Michigan with opportunities to view the islands.¹⁴⁶ A band of musicians hired by the captain provided entertainment for the entirety of the trip, with round trip fare from Toledo to Chicago costing \$25.00. Other occasions saw individuals or groups renting steamers for day cruises.¹⁴⁷ There is no report on the success of *Anthony Wayne's* 1839 excursion, but the public enjoyed them so much that many Great Lakes steamers continued the tradition well throughout the 19th century and into the 20th.

Over the next two years, *Anthony Wayne* continued its career without much excitement. Early in the 1840 season, the Steamboat Combination decided to pull

While information pertaining to *Anthony Wayne* from the 1842 season is plentiful, a controversy involving the Steamboat Combination stands out as the most

¹⁴⁵ An article from the *Toledo Blade* (28 April 1841, 2) states that this conversion started to take place in 1841, while newly-built boats coming out after this would already be properly updated.

¹⁴⁶ *Toledo Blade* 7 August 1839, 3.

¹⁴⁷ *Buffalo Commercial Advertiser* (21 April 1838, 2) reports that the Young Men's Association of Buffalo had the pleasure of taking a short cruise on the steamer *Buffalo* in April 1838.

prominent. It should be noted that since its inception, there were a good number of people both for and against the Combination, with the latter group being much more vocal about with their concerns. For example, an article in the *New Yorker* chastises the Steamboat Combination for standardizing prices amongst all the steamboats in their fleet, forcing passengers to pay the same fare whether traveling on a first-rate vessel or a “decrepit and paralytic” one.¹⁴⁸ Furthermore, as already stated, the Combination would also intentionally lay-up certain vessels in order to maximize profits. The *Milwaukee Sentinel* notes that by laying up steamboats and increasing shipping rates, the Combination was unknowingly providing more business to sailing vessels.¹⁴⁹ On the same topic the *Toledo Blade* reports that in 1840 a total of 16 steamboats were laid up that season, thereby crippling shipping and commerce, in addition to having hundreds of lake sailors be put out of a job.¹⁵⁰ Competition from sailing and other steam vessels continued on through 1841, but the Combination still decided to lay up seven vessels, causing some to think the group would cease to exist that year.¹⁵¹ As steamboat owners grew agitated with such constraining regulations set by the Combination’s board of directors, some openly defied this organization. One such vessel that ran openly against the Steamboat Combination in 1841 was *Daniel Webster*, offering passenger fare from Buffalo to Detroit for \$5.00, earning itself the nickname ‘Black Dan’.¹⁵² Others echoed the frustration caused by this monopoly, claiming the Combination offered nothing more

¹⁴⁸ *The New Yorker* 3 August 1839, 12:3 (in *The New Yorker* 7, edited by Horace Greeley and Park Benjamin. New York: H. Greeley & Co).

¹⁴⁹ *Milwaukee Sentinel* 16 July 1839, 2.

¹⁵⁰ *Toledo Blade* 29 July 1840, 2.

¹⁵¹ *Toledo Blade* 16 June 1841, 3.

¹⁵² *Milwaukee Sentinel* 22 June 1841, 2.

than to “shave and defraud the public” by refusing to run more boats on Lake Michigan and thus refusing to accommodate up-and-coming cities that could directly benefit from a more steady line of steamers.¹⁵³ These examples highlight public concern with a business arrangement such as the Steamboat Combination.

In the 1842 season, controversy arose between A.W. Fairbanks, editor of the *Toledo Blade* and vehement supporter of the Combination, and the captain of *Anthony Wayne*. Much speculation existed in the first months of the year concerning the Combination’s continued existence, primarily because owners of newer, more elaborate boats had to share profits with “old unseaworthy hulks” and demanded that shares be renegotiated.¹⁵⁴ In April, the *Milwaukee Sentinel* announced that the Steamboat Combination had broken up and that there would be no arrangement for this season.¹⁵⁵ This proclamation came too early, however, as the Combination eventually did reach an agreement, again placing *Anthony Wayne* in the Buffalo-Toledo line along with *General Harrison*, *Benjamin Franklin*, *General Scott*, *Rochester*, *Robert Fulton*, and *Oliver Hazard Perry*.¹⁵⁶ Fairbanks went to great lengths to describe how the Combination almost failed and published two articles on the 1842 negotiations, taking care to mention *Anthony Wayne* and Capt. Pratt explicitly. In early May, Fairbanks reported on the terms allegedly demanded by the steamer’s owners before agreeing to enter the Combination:

¹⁵³ *Milwaukee Sentinel* 17 August 1841, 3.

¹⁵⁴ *Milwaukee Sentinel* 26 February 1842, 3.

¹⁵⁵ *Milwaukee Sentinel* 23 April 1842, 2.

¹⁵⁶ *Toledo Blade* 13 May 1842, 2.

EXCURSION TO THE UPPER LAKES.

THE ELEGANT AND SUBSTANTIAL STEAMBOAT



GEN. WAYNE, A. PRATT, MASTER,

WILL leave Toledo on a pleasure excursion to the Upper Lakes, on the morning of the 13th of August, touching at all the ports on lake Huron, and at Mackinac, giving time to view the Islands on Lake Michigan. Also—touching at Green Bay, Milwaukee, Racine, South Port, Chicago, Michigan City, New Buffalo, St. Joseph, Grand River, and at Port Sheldon, if the weather will permit.

The Gen. Wayne is 400 tons burthen and is fitted up with state rooms for 85 passengers, and berths in the gentlemens cabin which gives accommodation for near 200 passengers. She has three steerage cabins for deck passengers, and her accommodations are equal, if not superior to any boat in the Upper Lake trade.

A band of music is engaged for the trip.—Fare from Toledo to Chicago and back again to Toledo, at the low price of \$25.

For passage apply to the captain on board, or at the office of **A. PALMER & CO.**

July 31, 1839.

Agents.

Figure 8: Anthony Wayne pleasure excursion advertisement, 1839. (*Toledo Blade* 7

August 1839, 3)

Before the steamer *Gen. Wayne* would go in, she must be allowed three more shares than last year- be put in the Chicago line, and two boats of light draught, say the *Scott* and *Fairport*, must be sent to the ‘foot of the rapids’ [Maumee River], weekly or pay a heavy fine for the use of the *Wayne*. Conditions so unreasonable could not be agreed to, and the combination broke up simply because Capt. Pratt and our up-the-river neighbors could not monopolize monopoly, and compel two boats weekly during the season, to the ‘foot of the rapids,’ where business did not require them.¹⁵⁷

A month later, Fairbanks continued his tirade against *Anthony Wayne*, obviously displeased with Pratt and his decisions concerning the vessel, further explaining the Combination’s circumstances in 1842. He states that after *Anthony Wayne* was denied Maumee (i.e. the foot of the rapids) as the terminus for the Toledo line, Pratt would only enter into the Combination if Monroe, Michigan, where a new railroad line was established, were chosen as the terminus instead of Toledo.¹⁵⁸ Fairbanks went on to say that on its most recent trip, *Anthony Wayne* did travel to Monroe, 20 miles (32.19 km) north of Toledo, and made its Toledo passengers wait an entire day in the frog and mosquito infested marshes off Monroe for the railroad cars to arrive in that city.¹⁵⁹ Fairbanks clearly saw the actions of Pratt not only as directly injurious to the interests of

¹⁵⁷ *Toledo Blade* 6 May 1842, 2.

¹⁵⁸ *Toledo Blade* 3 June 1842, 1.

¹⁵⁹ *Toledo Blade* 3 June 1842, 1.

Toledo and *Anthony Wayne*'s passengers, but so self-serving as to risk the profits of the entire Buffalo-Toledo line by jeopardizing the Combination's existence.

Word traveled fast and it was not long before Pratt had a chance to respond. After reading the *Toledo Blade*, Pratt replied with a letter to Fairbanks in which he addressed each grievance listed by the editor. Regarding Monroe being a new terminus for *Anthony Wayne*, Pratt had this to say:

The owners of the *Gen. Wayne* required, as one of the conditions upon which she should be put in the combination, that not less than four boats should run weekly from Buffalo to the foot of the rapids. One of the conditions imposed upon us was, that we should touch at Huron or Monroe. I did not stipulate or ask to go to Monroe, but consented to do so rather than be obliged to stop at Huron.¹⁶⁰

Pratt refuted the claim made by Fairbanks that the owners of *Anthony Wayne* intended to injure their neighbor, Toledo. He noted that boats entering the Maumee River stopped at Toledo and added, "My confidence in the location of Toledo is too strong to believe that its prosperity can be at all affected, because a few extra passengers ride *through* a rival city." Fairbanks published Pratt's response in its entirety, conceding that the information he had was erroneous, even though it came from trusted individuals.¹⁶¹ Despite Fairbanks' harsh remarks, it appears that *Anthony Wayne* was affected very little by

¹⁶⁰ *Toledo Blade* 10 June 1842, 2.

¹⁶¹ *Toledo Blade* 10 June 1842, 2.

these accusations and continued to stop at Toledo as stipulated by the Combination without further incident.

The degree to which this argument affected the Steamboat Combination is not immediately known. A review of the primary source material cited in this study does not show any other steamboat being targeted for trying to injure or jeopardize the Combination in the same manner as *Anthony Wayne* was in 1842. It is also unclear what affect the outcome had on the bargaining power of other steamers. In his response, Pratt does not address Fairbank's earlier claims that the steamer's owners required three more shares than the previous year before entering into an agreement. It may be possible that managers of more luxurious and handsome steamboats wanted more shares than their worn and weathered counterparts, but there is a lack of evidence for this claim. What is known is that for the remainder of the 1840s the Steamboat Combination suffered harsh criticism from both the public and other steamboat owners due to inflated fares and short stopping times at ports.¹⁶²

After this controversy, *Anthony Wayne* enjoyed a relatively quiet navigation season in 1842. The steamer worked the Buffalo-Toledo route, continually hauling passengers and freight from one side of Lake Erie to the other. On the Fourth of July, the "splendid and commodious" steamer offered to the public a short day cruise to Detroit, which passengers described as "pleasant and agreeable."¹⁶³ The string of luck enjoyed by the steamer up to this point began to unravel late in the season as *Anthony Wayne* had

¹⁶² Hilton (2002, 31-3) chronicles the business dealings of the Steamboat Combination until its collapse in 1848.

¹⁶³ *Toledo Blade* 1 July 1842, 2; *Toledo Blade* 8 July 1842, 2.

two minor brushes with misfortune. First, while attempting to visit Maumee and Perrysburg at the foot of the rapids in late October, *Anthony Wayne* ran aground off the Perrysburg wharf and stayed that way for nearly an entire day before finally getting off.¹⁶⁴ No damage to the hull or loss of cargo was reported as a result of the grounding, and the vessel returned to work in short order.¹⁶⁵

Second, *Anthony Wayne* encountered a severe gale in late November that damaged other Great Lakes ships, but spared the steamer. The storm started on 17 November and lasted several days, bringing with it powerful winds and heavy snow. *Wayne* attempted to leave Buffalo on the morning of 20 November, along with several sailing vessels, but harsh conditions forced these vessels back to port.¹⁶⁶ Pratt managed to get *Anthony Wayne* to Cleveland on 23 November, taking note of all the grounded and wrecked vessels he could make out and furnishing the list to the newspapers of that city.¹⁶⁷ *Anthony Wayne* came through the turbulent gale without substantial injury. Regarding the magnitude of the storm, Mansfield says: “Up to this point in the history of lake navigation, no storm had swept with greater violence and destruction to the shipping interests, and with a greater sacrifice of human lives.”¹⁶⁸ The storm swept through the entire Great Lakes region, and by its conclusion it is estimated that 100 people died and 50 vessels wrecked as a result.¹⁶⁹ And with that the navigation season of

¹⁶⁴ *Toledo Blade* 28 October 1842, 2.

¹⁶⁵ *Toledo Blade* 28 October 1842, 3.

¹⁶⁶ *Buffalo Commercial Advertiser* 21 November 1842 (in *Chronicle & Gazette* [Kingston, ON] 26 November 1842) (MHGLC 2010).

¹⁶⁷ *Toledo Blade* 2 December 1842, 2.

¹⁶⁸ Mansfield 1899, 638.

¹⁶⁹ Mansfield 1899, 638.

1842 dwindled to a close, as the storm succeeded in freezing over several rivers and ports on Lake Erie.

1843 – 1844 Seasons

A major change for *Anthony Wayne* occurred in 1843 with the appointment of a new captain for the vessel. Captain Pratt, after being with the side-wheeler since its launch, decided to part with the steamer to begin work on one of the first propeller steamboats on the Great Lakes, *Samson*, launched later the same year.¹⁷⁰ With Pratt's interests lying elsewhere, owners of the steamboat hired Captain Lester H. Cotton as the new master of *Anthony Wayne*. Described as, "a life resident of Buffalo - one of the 'old folks'," Cotton was no stranger to lake steamers.¹⁷¹ During his time on the water he, "fitted out the steamer *Queen Charlotte*, commanded the ship *Milwaukee*... and afterwards [was] master of the *Monroe*, which was the first steam craft that towed a vessel up the Fort Erie rapids."¹⁷² Additionally, Cotton "was also master from time to time of the steamer[s] *Ohio*, *Pennsylvania*, *Daniel Webster*, *Oregon*, *Baltic*... and later on, the then mammoth steamer *Western World*."¹⁷³ On these vessels, Cotton spent much time in Lake Michigan, servicing the ports and cities with regularity. Residents at these places held the captain in high regard, and when it was made known that he would take over as commander of *Anthony Wayne*, the *Milwaukee Sentinel* posted the following:

¹⁷⁰ Appx. A.

¹⁷¹ Atkins 1898, 64.

¹⁷² Michigan Pioneer and Historical Society 1894, 362; Atkins (1898, 66) states that Cotton was in command of the schooner *Queen Charlotte* during the 1835-6 navigation season.

¹⁷³ Palmer 1906, 31.

“We hope that the Steamboat Combination will place the *Wayne* in the Upper Lakes Trade. Captain Cotton’s popularity will insure a great run of patronage for the Boat.”¹⁷⁴

Unfortunately, there is scant information regarding *Anthony Wayne*’s operations during much of the 1843 season. The steamer spent the first half of the season traveling to Chicago and the earliest report discovered is from the *Milwaukee Sentinel* that mentions a fire breaking out onboard towards the end of May. The article states:

This steamer came very near being destroyed by fire at Sandusky on the 24th inst. When the fire was discovered, it was issuing from the upper part of the engine room. It was extinguished without doing much damage. No doubt exists that it was the work of an incendiary.¹⁷⁵

No further information on this incident could be found, but it is known that *Anthony Wayne* made a speedy trip from Chicago to Buffalo in early July, so the damage sustained by the fire could not have been extensive.¹⁷⁶ This is further confirmed by a statement from a traveler who took passage from Mackinac to Chicago later that summer who described *Anthony Wayne* and Cotton as, “a noble boat, and a noble captain.”¹⁷⁷ The Combination again directed *Anthony Wayne* to return to the Toledo-Buffalo line in mid-August, where it remained for the duration of the season.¹⁷⁸

¹⁷⁴ *Milwaukee Sentinel* 17 May 1843, 2.

¹⁷⁵ *Milwaukee Sentinel* 3 June 1843, 2.

¹⁷⁶ *Milwaukee Sentinel* 15 July 1843, 2.

¹⁷⁷ *Sandusky Clarion* 26 August 1843, 2.

¹⁷⁸ *Toledo Blade* (1843) lists the arrival and departure information for *Anthony Wayne* in the Marine List from 16 August to 28 September 1843, which indicates its route as Toledo-Buffalo.

The beginning of the 1844 navigation season saw the steamer back in the Chicago line. *Anthony Wayne* apparently enjoyed much success in Lake Michigan, as evidenced by a notice in the *Milwaukee Sentinel* from that year:

The *Wayne*, under the command of Capt. Cotton, made the entrance into the Milwaukee Harbor, on Wednesday evening last, and ‘walked the water’ gallantly up the river to Dousman & Co.’s wharf, amid the ringing of bells and the cheers of our citizens, where she remained till morning. The German Band paid the boat a visit, and ‘discoursed’ fine music. The Boat for a number of hours was thronged with the gentlemen and ladies of the village. To the *Wayne* must be given the credit of being the first Boat of the larger class from the Lower Lake, which has come into the river since 1836.¹⁷⁹

The vessel remained in the Chicago line until early July, at which point the Hollisters sold the vessel, as indicated by officers of their propeller *Samson*.¹⁸⁰ The newspapers reported more on the sale of the steamer a few weeks later, stating, “The *Wayne* goes no more to Chicago. Having been purchased by some capitalists at Monroe, she will now be permanently placed on that route. Capt. Cotton of course remains in command.”¹⁸¹ According to the 1844 enrollment documents, these ‘capitalists’ included Benjamin F. Fifield, William C. Sterling, and Captain George W. Strong, all of Monroe, in addition to some remaining stockholders of the Perrysburg and Miami Steamboat

¹⁷⁹ *Milwaukee Sentinel* 11 May 1844, 3.

¹⁸⁰ *Milwaukee Sentinel* 6 July 1844, 3.

¹⁸¹ *Detroit Daily Advertiser* 24 July 1844 (MHGLC 2010).

Company.¹⁸² Fifield and Sterling co-owned a shipping warehouse in Monroe and also began to purchase steamers to increase trade at Monroe.¹⁸³ Strong also owned a warehouse and a store in that city, and was heavily involved in shipbuilding there, having several sail and steam vessels built over the years.¹⁸⁴ The 1844 enrollment also states that Cotton retained his role as master of *Anthony Wayne*.

Little else is known of *Anthony Wayne* from the 1844 season. Much like the year before, the only news of the steamer comes from a catastrophe, this time in the form of a violent gale that took place towards the end of the season. On 18 October, a powerful storm began to pound eastern Lake Erie, severely flooding the city of Buffalo and devastating several buildings and vessels, *Anthony Wayne* included. A newspaper report recounts the damage sustained by the steamer:

The *Com. Perry* came in about 12 o'clock last night in a most shattered condition- her wheel-house being smashed in- and the boat almost a cripple- in coming, she ran into the *Great Western*- knocking a man overboard in the collision, who was supposed to be lost- then she ran her bowsprit through the side of the *Wayne*- where she remained fastened.¹⁸⁵

Unfortunately, no additional reports have been found discussing the damages sustained by *Anthony Wayne*, nor is there any indication just how long the two Perrysburg

¹⁸² 1844 Enrollment (Appx. B). Wing (1890, 314) mistakenly cites 1842 as the year *Anthony Wayne* was purchased by Fifield, Sterling, and Strong.

¹⁸³ Wing 1890, 201, 314, 412; Bulkley 1913, 379.

¹⁸⁴ Bulkley 1913, 527-9.

¹⁸⁵ *Toledo Blade* 25 October 1844, 2.

steamboats stayed stuck together. For the city of Buffalo, Mansfield states that the storm and flooding, “was the most disastrous that has ever occurred since the city was founded. It came without warning, an avalanche of waters upon a sleeping community, many of whom were drowned and many of whom had narrow escapes from a similar fate.”¹⁸⁶ Newspapers reported on the havoc caused by the gale, stating that between 75 and 100 people lost their lives and that damage to vessels ranged from superficial to major.¹⁸⁷ After this incident, the side-wheeler does not feature in any further newspaper articles for the remainder of the 1844 shipping season. Presumably, repairs to Anthony Wayne’s hull took place immediately after being separated from *Oliver Hazard Perry*.

1845 – 1847 Seasons

A newspaper report of significant repairs and improvements to *Anthony Wayne* is the first information published about the vessel from the 1845 navigation season. Prior to this, public opinion of the steamer appears to have declined, as the article begins with an attempt to boost its reputation: “Having heard much said in commendation of the stm. *GEN. WAYNE*... we stepped on board the other day and found, as it appears to us, she deserves much more than had been said in her favor.”¹⁸⁸ This is the first time in which a newspaper hints at public dissatisfaction with *Anthony Wayne* in terms of accommodations and appearance. The authors of the article, originally published in the *Monroe Advertiser*, proceed to describe changes and improvements made to the steamer:

¹⁸⁶ Mansfield 1899, 641.

¹⁸⁷ *Toledo Blade* 25 October 1844, 2.

¹⁸⁸ *National Daily Pilot* [Buffalo, NY] 10 April 1845 (MHGLC 2010).

Her staterooms in the gentlemen's cabin are large, neat and comfortable, with two doors opening inside and out, having in this respect undergone an entire change while the new arrangement for the accommodation of steerage passengers, are equally happy, convenient and desirable. In fact, taste and comfort are displayed in all parts of the boat as now completed. The two saloons, the washroom and the kitchen, have not escaped nor been neglected, while the style and finish displayed in painting does great credit to Mr. Monroe of this city, who was engaged for the task. We bespeak therefore for the *Wayne* the attention and patronage of the public, feeling confident as we do, that she will be found by both cabin and steerage passengers, a desirable, neat and comfortable traveling residence. In short, the *Gen. Wayne* is now pronounced, by competent judges, worth as much, with her recent improvements, as when new.¹⁸⁹

It is not readily known what the new arrangement for steerage passengers consisted of, but as previously stated, steerage passengers had been occupying the main deck cabin since improvements made in 1839. Clearly the owners felt that sprucing up the aging steamboat would do *Anthony Wayne* some good, and the injury from the storm the previous year may have been the impetus for such renovations.

Another aspect mentioned in the same article is that *Anthony Wayne* received a new captain at the beginning of the 1845 navigation season. After almost two years of service aboard the side-wheeler, Cotton moved onto other ventures, although the

¹⁸⁹ *National Daily Pilot* [Buffalo, NY] 10 April 1845 (MHGLC 2010).

circumstances surrounding the captain's departure are not known. *Anthony Wayne's* new commander was Captain Alonzo D. Perkins of Monroe.¹⁹⁰ Perkins was born in Brunswick, Maine, in 1814 and quickly entered the maritime world, becoming a sailor at age 12.¹⁹¹ After spending much time sailing throughout the Atlantic, Perkins moved westward to Buffalo in 1839, where he built the brig *Osceola* and engaged in shipping to and from Chicago.¹⁹² He settled in Monroe in either 1843 or 1844, and soon after took command of *Anthony Wayne*.¹⁹³ What is unknown, exactly, is when Perkins took over as commander. Secondary sources state that he became captain of the vessel in 1844, but no first-hand account or newspaper sources prove this to be true.¹⁹⁴

With a new captain and having undergone desirable improvements, *Anthony Wayne* began the 1845 navigation season. The side-wheeler continued to service the familiar route from Buffalo to Toledo, alongside steamers *Indiana*, *Buffalo*, *Chesapeake*, *Lexington*, *United States*, and *DeWitt Clinton*.¹⁹⁵ In July, newspapers announced that *Anthony Wayne* came out in opposition to the Steamboat Combination and would run on its own terms.¹⁹⁶ In fact, the Combination faced a very difficult year in 1845 as many people grew discontented with the fares and rates charged by the group. The Combination raised rates that year for passengers travelling between Buffalo and Detroit

¹⁹⁰ *National Daily Pilot* [Buffalo, NY] 10 April 1845 (MHGLC 2010).

¹⁹¹ Bulkley 1913, 526; Pioneer Society of the State of Michigan 1884, 486.

¹⁹² Bulkley 1913, 526.

¹⁹³ Bulkley (1913, 526) states Perkins came to Monroe in August 1844 while Pioneer Society of the State of Michigan (1884, 486) lists the date as 1843.

¹⁹⁴ Pioneer Society of the State of Michigan (1884, 486) and Bulkley (1913, 526) both state Perkins commanded *Anthony Wayne* in 1844, whereas Wing (1890, 314) claims he became captain in 1842.

¹⁹⁵ *Toledo Blade* 11 July 1845, 2.

¹⁹⁶ *Toledo Blade* 11 July 1845, 2.

from \$6.00 to \$7.00, and also raised fares for passage to Cleveland.¹⁹⁷ The public did not take kindly to the increase, and as an article in the *Toledo Blade* states, “Seven dollars, for 280 miles of the safest and cheapest steaming in the world, is an enormous fare.”¹⁹⁸ Talk of forming an opposition line in response to the actions of the Combination began, as more and more passenger steamers decided not to join the monopoly.¹⁹⁹ While an opposition line did not form, vessels running in opposition that season included the steamers *John Owen* and *Huron*, which charged \$4.00 for cabin passage and \$2.00 for steerage between Buffalo and Detroit.²⁰⁰

Anthony Wayne stayed in the Lake Erie steamboat fleet for 1845 and had a very active season. Not being tied to the Combination’s agreement meant the owners could decide for themselves when it would be most advantageous for the steamer to run. Arrival information listed in the *Toledo Blade* indicates that *Anthony Wayne* came into that city mostly on Saturdays and Sundays during the first half of the season, with a few exceptions that may be related to weather or other circumstances.²⁰¹ Interestingly, the side-wheeler is not listed in any of the arrival information from the end of July to the end of August, but there is no mention of the vessel experiencing any difficulties or injuries during that time. A few weeks earlier, a newspaper article very colorfully pointed out the age of *Anthony Wayne*, stating that the vessel is “*eight years old*” and while running on the lake appears “as desperate as if in a death struggle.”²⁰² There is no question that the

¹⁹⁷ *Toledo Blade* 18 July 1845, 2.

¹⁹⁸ *Toledo Blade* 18 July 1845, 2.

¹⁹⁹ *Toledo Blade* 25 July 1845, 2.

²⁰⁰ *Toledo Blade* 4 July 1845, 2.

²⁰¹ *Toledo Blade* Marine List May, June July 1845.

²⁰² *Toledo Blade* 11 July 1845, 2.

steamer was, in fact, gaining in years, but the mid-season hiatus lasted only one month, and by the end of August *Anthony Wayne* once again plied the Buffalo-Toledo route, changing its arrival into Toledo midway through the fall season from the end of the week to Mondays.²⁰³

In mid-October, *Anthony Wayne* suffered a small misfortune on a routine run from Buffalo to Toledo after assisting with another maritime accident. In the early morning hours of 10 October, while off Dunkirk, NY, the side-wheel steamboat *Troy* suffered a collision with the propeller *Phoenix* and sustained considerable damage.²⁰⁴ *Troy* managed to make its way back to Buffalo, where *Anthony Wayne* helped by taking part of the steamer's passengers and cargo back westward. When *Anthony Wayne* came into Toledo on 13 October, newspapers indicated that the steamer was, "in danger of being consumed by fire on her way up."²⁰⁵ The incident did not prove to be major, as *Anthony Wayne* kept a very regular schedule that month and arrived back in Toledo exactly seven days later.²⁰⁶ Perkins kept the steamer running until the end of the navigation season, with the last report of *Anthony Wayne* being its arrival into Toledo on 26 November 1845.²⁰⁷

Starting in June of 1845, the *Toledo Blade* newspaper began publishing abbreviated cargo manifests for the vessels coming into that port. These offer a glimpse into the types of items being shipped across Lake Erie in the mid-1800s. As stated in

²⁰³ *Toledo Blade* Marine List August, September, October, November 1845.

²⁰⁴ *Toledo Blade* 17 October 1845, 2.

²⁰⁵ *Toledo Blade* 17 October 1845, 2-3.

²⁰⁶ *Toledo Blade* 24 October 1845, 3.

²⁰⁷ *Toledo Blade* 28 November 1845, 3.

Chapter 2, the steamer could carry up to 1,500 barrels of freight, in addition to miscellaneous cargo that could be stowed on the main deck. In Gerstner's analysis of Great Lakes steamboats, he notes that two-thirds of their total revenue came from passengers and one-third from freight.²⁰⁸ In 1845 *Anthony Wayne* mostly carried small consignments and general merchandise to various merchants at Toledo. On one particular well-laden voyage, the vessel brought to that city, from Buffalo: 146 packages of merchandise for Ludlow, Babcock, & Brown; 118 packages of merchandise for E. Haskell & Co.; 3 packages of merchandise for Charles H. Williams; and 2 packages of merchandise for Palmer, Brown, & Co.²⁰⁹ In addition to shop goods, other items being shipped to Toledo via *Anthony Wayne* that year included wagons, apples, iron bars and bundles, and metal castings.²¹⁰ An examination of the arrival list for all steamers coming into Toledo during June 1845 provides a more complete understanding of the goods and resources being shipped aboard steamboats during June 1845: pork, beef, bacon, lard, tallow, hides, furs, soap, beeswax, hemp, wool, flour, potatoes, flax seed, feathers, wheat, ashes, and furniture.²¹¹ Even a glance at one day's arrivals for one western city shows the extent of what steamboats were carrying across the Great Lakes, including the staples of daily life in the American frontier during the 19th century.

The 1846 navigation season saw the beginning of the end for *Anthony Wayne*. Marine arrival lists show Perkins first bringing the old side-wheeler into Toledo from

²⁰⁸ Gerstner (1997, 420) arrives at these percentages by analyzing passenger steamer *Illinois* during several trips made between Buffalo and Chicago in the 1839 navigation season.

²⁰⁹ *Toledo Blade* 12 September 1845, 3.

²¹⁰ *Toledo Blade* 17 October 1845, 3; 24 October 1845, 3; 21 November 1845, 3; 28 November 1845, 3.

²¹¹ *Toledo Blade* 6 June 1845, 3.

Buffalo on 8 May 1846.²¹² *Anthony Wayne*'s schedule for this year varied week to week, although in the month of May the steamer would arrive in Toledo on either Thursday or Friday, stay in that city for a full day, and then return to Buffalo.²¹³ Perkins ran the boat faithfully, consistently making the round trip between the two cities in six days. *Anthony Wayne* ran the usual shipping route in this way until 19 June, at which point it headed north toward Detroit.²¹⁴ A brief notice in the *Toledo Blade* states that the steamer retired to Monroe, with no further information provided.²¹⁵ It was not uncommon for steamboats to be temporarily out of commission, mostly to make repairs, or, as previously discussed when pulled from the schedule by the Steamboat Combination. *Anthony Wayne* was done with the Combination by this time, however, so repairs are more likely even though no mention of damage or disrepair appears in the historical record. This retirement was short lived, however, as *Anthony Wayne* returned to service on the Buffalo-Toledo route in mid-July of that year.²¹⁶

During this short sabbatical, ownership of *Anthony Wayne* changed hands a second time. It is possible the steamer was taken out of commission while the sale was being negotiated, but evidence for this has not been found. Fifield, Sterling, and Strong decided to part with the vessel, but for what reason remains unclear. Enrollment documentation from Detroit indicates that the vessel's then-master, Captain A.D. Perkins, took over as primary owner of *Anthony Wayne*, along with Edward G. Morton

²¹² *Toledo Blade* 11 May 1846, 3.

²¹³ *Toledo Blade* Marine List May 1846.

²¹⁴ *Toledo Blade* 24 June 1846, 3.

²¹⁵ *Toledo Blade* 22 June 1846, 3.

²¹⁶ *Toledo Blade* 17 July 1846, 3.

and the remaining stockholders of the Perrysburg and Miami Steamboat Company.²¹⁷ Morton and Perkins purchased *Anthony Wayne* for an unknown sum of money, and after new enrollment documentation papers were filed at Detroit, *Anthony Wayne* returned to service in mid-July of 1846.²¹⁸

Following the sale, the aging side-wheeler resumed its place in the Lake Erie steamboat fleet. In addition to *Anthony Wayne*, the other steamers plying the route from Toledo to Buffalo this year consisted of *Indiana*, *Troy*, *Chesapeake*, *William H. Harrison*, and *Bunker Hill*.²¹⁹ During the second half of the 1845 season, the steamer ran on a six day round-trip schedule between the two cities, almost always staying in Toledo for one full day before heading back out.²²⁰ During this time, the officers of *Anthony Wayne* received much praise from the *Toledo Blade* for bringing in newspapers from the east, a task usually taken up by either the purser or the saloon keeper.²²¹

In October, however, word came that *Anthony Wayne* would cease to operate as a steamboat. An article published in the *Toledo Blade* told of a new steamer being built at Monroe that would be powered by the engine currently in *Anthony Wayne*.²²² No name is given for this new steamboat under construction, nor is the fate of *Anthony Wayne* discussed any further. The article suggested that the vessel's current officers, namely

²¹⁷ 1846 Enrollment (Appx. B). The enrollment is dated 9 June 1846, but this appears to be a mistake and should likely be 9 July. According to marine arrival lists in the *Toledo Blade* (10 June 1845, 3; 15 June 1845, 3), the vessel departed Toledo for Buffalo on 8 June and did not return to that city until 13 June, indicating that Perkins could not have filed the documents in Detroit during that time. He could have filed them, however, on 9 July as *Anthony Wayne* was 'retired' at Monroe until 15 July.

²¹⁸ *Toledo Blade* 17 July 1846, 3. Bingham (1888, 478-9) and Wing (1890, 491-2) provide a short biography for Morton, including his endeavors as a newspaper printer and editor.

²¹⁹ *Toledo Blade* 7 August 1846, 3.

²²⁰ *Toledo Blade* Marine List 1846, 3.

²²¹ *Toledo Blade* 31 August 1846, 3; 7 September 1846, 3; 9 October 1846, 2.

²²² *Toledo Blade* 26 October 1846, 3.

Captain Perkins, Mr. Morton (clerk), and Charley Savanack (saloon keeper), would likely be transferred to the new steamer, and praised the gentlemen for their success and popularity.²²³ The last newspaper entry for *Anthony Wayne* in the 1846 season reported the vessel entering Toledo on 2 October 1846.²²⁴

Information pertaining to *Anthony Wayne*'s 1847 navigation season is sparse at best, but sufficiently details the demise of the vessel's steamboat career. The first mention of *Anthony Wayne* comes from a newspaper notice highlighting the speed of the propeller *Globe*, also built by Samuel Hubbell.²²⁵ In May, *Globe* departed Buffalo and made it to Toledo in 31 hours, a notable feat for any vessel and a testament to the speed of propeller boats.²²⁶ It was reported that *Globe* passed *Anthony Wayne* as the vessels passed Sandusky, despite the fact that side-wheeler left Buffalo some time before *Globe* did.²²⁷ This accomplishment likely boosted the reputation for the propeller, but potentially affected *Anthony Wayne* as well. Based on its schedule from the previous season, *Anthony Wayne* usually made the run from Buffalo to Toledo in three days. Thanks to rapidly evolving steamboat technology, three days was no longer seen as swift. Even though the article meant to praise *Globe*, it inadvertently painted *Anthony Wayne* as a slow vessel. There is no way to know if comments such as these affected the steamer's business. Perkins continued to run the same route on a regular weekly schedule, although this season he decided not to stay a day in Toledo, and the round trip

²²³ *Toledo Blade* 26 October 1846, 3. Note: it is not known whether *Anthony Wayne*'s clerk, Mr. Morton, is in fact Edward G. Morton, one of the steamboat's owners, or perhaps a relative.

²²⁴ *Toledo Blade* 5 October 1846, 3.

²²⁵ Appx. A.

²²⁶ *Toledo Blade* 7 May 1846, 2.

²²⁷ *Toledo Blade* 7 May 1846, 2.

duration between the two cities increased from six days to seven.²²⁸ On 29 June, *Anthony Wayne* removed itself from the navigation season early and departed Toledo for Monroe, the last trip the vessel would make this season under its own steam power.²²⁹

The next appearance of *Anthony Wayne* in the historical record is not until November 1847. An article in the *Toledo Blade* discusses the fate of the once-great steamboat:

We have chanted the requiem of several of the steam boats built upon this river, since our residence here; but of none have we done so with more reluctance, than we now do of the one whose name heads this article. The *Anthony Wayne*, was in her prime, the best boat on old Erie. For several years she stood among the first. She was the first boat on the lake that received the delightful appendage of an upper cabin, now so common, that no boat is considered finished without one. She came out late in the season of 1837, and did a good business that year. Upon taking down her engine, it was discovered, that both of her boiler heads (being of cast iron) had crumbled into small pieces, and that she had probably made several trips with them, in this condition. Yet she met with no incidents- and run steadily until this season, when she was found unfit for any further use as a steamboat. Poor old boat! She is now divested of her upper works and engine, and is to be converted into a sail craft.²³⁰

²²⁸ *Toledo Blade* Marine Lists 1847.

²²⁹ *Toledo Blade* 30 June 1847, 2.

²³⁰ *Toledo Blade* 10 November 1847, 2.

Faulty boiler heads could have been disastrous for the steamer and may explain the increased seven day running time, as the engine's efficiency would have been significantly compromised. In Gerstner's study, the estimated lifespan of a Great Lakes steamboat was calculated as being between 10 to 12 years.²³¹ *Anthony Wayne*, being launched in 1837, was exactly 10 years old when removed from service, confirming this estimate.

A week after the announcement appeared detailing the steamer's retirement and degraded state, ownership of *Anthony Wayne* changed hands a third and final time. With *Anthony Wayne* no longer fit to operate as a steamboat, Perkins removed the vessel's engine and sold the hull to Charles D. Howard of Detroit (Fig. 9).²³² A methodical businessman, it is said that, "If Charles Howard believed himself to be in the right, no matter at what personal loss, he would carry out his plans as he formed him."²³³ Despite holding a variety of private and public offices, Howard still involved himself with his forwarding and shipping enterprise, which led him to purchase *Anthony Wayne* in 1847. After the sale, a short newspaper article described the steamboat's coming to Detroit, having arrived in tow from Monroe, "minus her engine, pipes, and all her internal

²³¹ Gerstner 1997, 419.

²³² *Cleveland Weekly Herald* 17 November 1847. Heyl (1956, 99) erroneously recorded Howard's middle initial as 'B', a mistake that has been repeated throughout the years; the middle initial is, in fact, 'D'. Farmer (1889, 1039) and American Dramatists Club (1910, 50) provide brief biographies for Howard, including his arrival to Michigan in 1840, his endeavors in railroad and maritime shipping, and his stint as mayor of Detroit in 1849.

²³³ American Dramatists Club 1910, 51.

apparatus- a mere skeleton.”²³⁴ Howard originally intended to convert the old steamboat into a sailing craft, as the sale is noted as being for the hull only.²³⁵



Figure 9: Charles D. Howard. (American Dramatists Club 1919, 50)

There has been some confusion about what happened to the engine from *Anthony Wayne*. The engine constituted one of the most costly purchases in the construction of a steamboat, so it was typical to transplant a still-working engine from a decaying boat into a newer one.²³⁶ While *Anthony Wayne*'s boiler heads had deteriorated over its 10 year career, the square engine built by Hathaway and Company still functioned well

²³⁴ *Cleveland Weekly Herald* 17 November 1847.

²³⁵ *Cleveland Weekly Herald* 17 November 1847.

²³⁶ Hunter 1993, 112-3. *Milwaukee Sentinel* (8 March 1843, 2) reports the total cost of *Anthony Wayne*'s construction as being \$70,000, with the engine comprising \$18,000 of that. Therefore, in this case, over 25% of the total construction costs went into the purchase of the engine.

enough to be put into another steamer. As previously stated, beginning in 1846, reports began coming out stating that a new vessel under construction would receive the engine from *Anthony Wayne*. A notice from February 1847 regarding the building of the steamboat *Franklin* begins this mystery stating, “This [vessel], with the new boat for the *Wayne*’s engine, and Strong’s... makes three new boats building here [Monroe] this winter.”²³⁷ The new boat that would receive the Hathaway engine was being built by Fifield and Sterling, former owners of *Anthony Wayne*. Strong, also a former co-owner, was having a separate steamboat built at Monroe at the same time. Strong’s boat came out initially as *Columbia*, but quickly changed names to *Baltimore* within months of its launch. A notice originally published in the *Detroit Advertiser* explicitly stated that *Anthony Wayne*’s engine transferred into *Baltimore*.²³⁸ This directly conflicts, however, with an earlier report from July that states *Baltimore*’s engine came from Eagle Iron Works in Buffalo.²³⁹ Regarding the other vessel being built at Monroe, owned by Fifield and Sterling, named *Southerner*, no explicit information on its engine has yet been found. When launched, though, *Southerner* was commanded by A.D. Perkins, the most recent owner of *Anthony Wayne*.²⁴⁰ Since it is stated that Howard only paid for *Anthony Wayne*’s hull, it seems likely that Perkins reserved the engine for the vessel that he was set to command, *Southerner*. This conclusion is echoed in secondary sources, but no

²³⁷ *Cleveland Weekly Herald* 10 February 1847, 3.

²³⁸ *Cleveland Weekly Herald* 17 November 1847 (MHGLC 2010).

²³⁹ *Toledo Blade* 30 July 1847, 1.

²⁴⁰ *Cleveland Weekly Herald* 13 October 1847.

primary sources were discovered that explicitly stated that *Southerner* received *Anthony Wayne's* engine.²⁴¹

The Refurbished Side-wheel Steamer

Howard definitely had plans for *Anthony Wayne* at the end of 1847, and construction quickly commenced on the hull the following season. Enrollment documentation from 1849 lists the place of the rebuild as Trenton, Michigan, with the superintendent of the building listed as D.W. Donaho.²⁴² A search of historical newspapers and local histories yielded very little on this man, but a separate enrollment for the schooner *O.H. Perry* from June 1847 lists a D.W. Donahoe, from China, St. Clair County, Michigan, as a co-owner of the vessel.²⁴³ While the spellings are slightly different, it stands to reason that this is the same individual given the degree of involvement with maritime enterprise. Some sources attribute *Anthony Wayne's* rebuild to Joseph M. Keating, but this appears to be false information.²⁴⁴ Donaho worked under the close inspection of Howard, it being said that, “the *Wayne* was refitted and repaired under his eye and the work was undoubtedly well done, so far as human eye could discover.”²⁴⁵

²⁴¹ Heyl (1956, 99) states that *Anthony Wayne's* engine went into *Southerner* during its construction.

²⁴² 1849 Enrollment (Appx. B). TBNMSC and GLSF note the spelling of the name as ‘Donahue’, which does not agree with the spelling listed on the enrollment papers.

²⁴³ 1847 Enrollment (MHGLC 2010).

²⁴⁴ Gregor (year unknown); Erik Heyl Papers Box 1 (BGSUC). Robinson (1999, 37) states that Keating was the man behind building the ill-fated schooner *Alvin Clark*, and was in Vermilion, OH during the 1848 season engaged in work on the propeller *Indiana*.

²⁴⁵ *Toledo Blade* 4 May 1850, 2.

While undergoing its overhaul in late spring 1848, *Anthony Wayne* suffered injury while laid up in the Detroit River. A powerful storm, described by some as a hurricane, ripped through the area on 23 May, severely damaging the vessel. Reports on the damage sustained, which included broken glass, chimneys blown down, and trees uprooted, stated *Anthony Wayne* had its upper deck completely taken off and tossed in the river.²⁴⁶ Since the steamer reportedly arrived at Detroit from Monroe “divested of her upper works”²⁴⁷ in 1847, this suggests that by May 1848, Donaho and his workmen had managed to rebuild at least some the hull’s superstructure.

In June, a progress report published in the *Detroit Free Press* talked about the work taking place on *Anthony Wayne*:

The Steamer *Wayne*- In passing along the upper end of the city, a few days since, we noticed this valuable old vessel that has been completely overhauled and rebuilt by Mr. Charles Howard. Their workmen are still engaged on her, but she is so much rigged up that a person scarcely can recognize the old familiar friend.²⁴⁸

According to later accounts, the vessel underwent an extensive rebuild from the keelson up during this time, which would explain why the building had not finished by the time this notice appeared.²⁴⁹ Also, the title of this article, “The Steamer *Wayne*,” warrants mention as it appears that by this time Howard decided to keep *Anthony Wayne* running

²⁴⁶ *Buffalo Commercial Advertiser* 29 May 1848 (MHGLC).

²⁴⁷ *Toledo Blade* 10 November 1847, 2.

²⁴⁸ *Detroit Free Press* 14 June 1848.

²⁴⁹ *Toledo Blade* 4 May 1850, 2.

as a steamboat and not convert it to a sailing craft as originally intended. Unfortunately, further details on the vessel's revitalization efforts for the remainder of the season are lacking, but it is presumed that construction continued on through the fall and winter months.

Howard's decision not to convert *Anthony Wayne* to sail is likely tied to the misfortune of another Great Lakes steamboat, the side-wheeler *Columbus*. Built in 1835 by Benjamin S. Goodsell at Huron, Ohio, *Columbus* was originally owned by Captain Augustus Walker and ran as a passenger and cargo carrier for the Upper Lakes (Fig. 10).²⁵⁰ The boat was powered by a horizontal, direct-acting engine built at the foundry of Binney and Warden.²⁵¹ In March 1848, while making a run into the harbor at Dunkirk, *Columbus* accidentally ran onto a reef or submerged breakwater near the pier, stoving a hole into the bottom of the hull.²⁵² Debilitated and unable to rekindle the fires, the steamer sank in 8 to 10 ft. (2.44 to 3.05 m) of water, where wind and waves pounded *Columbus* to pieces. The side-wheeler was deemed a total loss, but the engine, which escaped injury, was salvaged from the wreck. In order to bring renewed life to *Anthony Wayne*, Howard purchased the horizontal engine from D.C.M Goodsell, owner of *Columbus* at the time of its loss, and had it installed into the refurbished steamer.²⁵³ A

²⁵⁰ Heyl 1964, 93.

²⁵¹ *Cleveland Weekly Advertiser* 30 June 1835 (MHGLC 2010); Heyl (1964, 93) describes the type of engine, but credits it being built by Olds & Company of Sandusky, OH, which conflicts with more primary source data. A report from the Secretary of the Treasury (U.S. Treasury Department 1838, 332) offers a slightly different name for the manufacturers of the engine, that being Warden and Bennett, but this should be regarded with caution as the same reports claims the engine was built in September 1835, three months after *Columbus* launched.

²⁵² *Buffalo Republic* 6 April 1848 (MHGLC 2010); Heyl 1964, 93.

²⁵³ *Buffalo Commercial Advertiser* 23 April 1849, 2.

bill of sale has not been found, so it is unknown how much Howard paid for the 14-year-old engine. Age proved not to be a factor, however, as the engine was found to be every bit as functional as when it was first installed in *Columbus*.

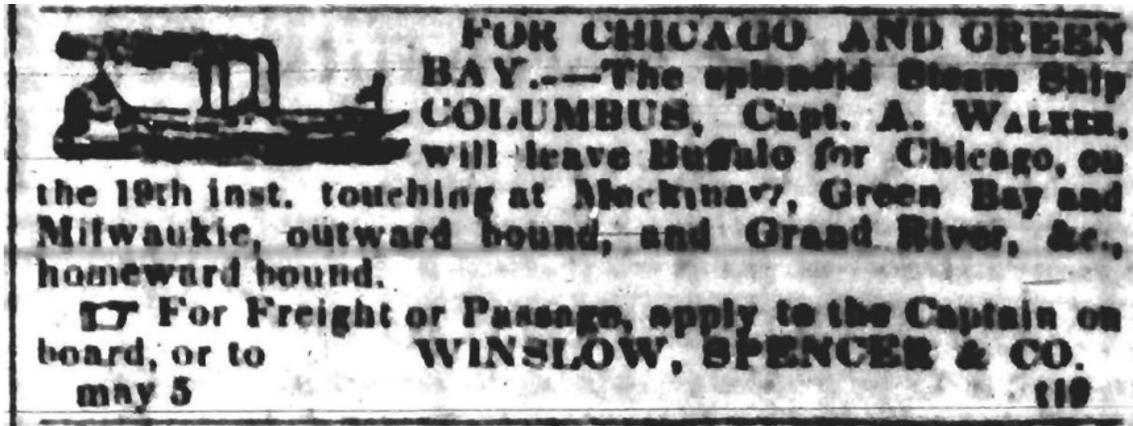


Figure 10: Steamboat *Columbus* Advertisement, 1838. (*Buffalo Commercial Advertiser* 5 May 1838, 2)

The direct-acting engine from *Columbus* differed greatly from the square engine *Anthony Wayne* originally had in terms of both orientation and operation. High-pressure steam engines such as this tended to be mounted horizontally, as was the convention in most Western River steamboats, but exceptions did exist.²⁵⁴ This arrangement did not need the robust bracing and support needed by vertical engines, as the engine would be bolted directly to longitudinal cylinder timbers that were incorporated into the structure of the hull.²⁵⁵ Without the need for bulky A-frames or supports, overall draft of the

²⁵⁴ Thurston 1878, 384.

²⁵⁵ Hunter 1993, 138.

vessel decreased and previously-occupied deck space was opened up.²⁵⁶ Overall, the design of the direct-acting engine was simpler than other marine engines. It consisted of a cylinder, usually seated in a slightly inclined position, with a piston joined to the crank via a connecting rod with crosshead linkage (Fig. 11).²⁵⁷ As the piston moved back and forth, the crosshead converted reciprocal motion into rotary motion, thereby turning the cranks and thus the drive shaft. This compact and simple mechanical arrangement made direct-acting engines very popular, as they were cheap to purchase and easy to repair, as they lacked additional connecting rods and other extraneous mechanical components.²⁵⁸ The overall design of the direct-acting engine was so efficient and straightforward that it did not undergo substantial improvement for 30 years after its arrangement achieved its standardized, familiar form in the 1830s.²⁵⁹ These engines were not only well suited for maritime enterprise, but general work operations, such as cotton gins, saw mills, and small machine shops also benefitted from these power systems.²⁶⁰ The effectiveness of this type of engine is attested by the career of *Columbus*, as the steamer ran for 13 years without a drive system incident or failure, a record that was carried on by *Anthony Wayne*.

²⁵⁶ *Milwaukee Sentinel* (8 March 1843, 2) states *Anthony Wayne's* square engine occupied 50 ft. (15.24 m) on deck, while an Ericson propeller with a horizontal engine occupied no space on deck, the entirety of the engine being within the hold.

²⁵⁷ Sennett and Oram 1902, 7-10; Hunter 1993, 136.

²⁵⁸ Hunter 1993, 141.

²⁵⁹ Hunter 1993, 141.

²⁶⁰ Sennett and Oram 1902, 10; Ludy 1913, 31-2.

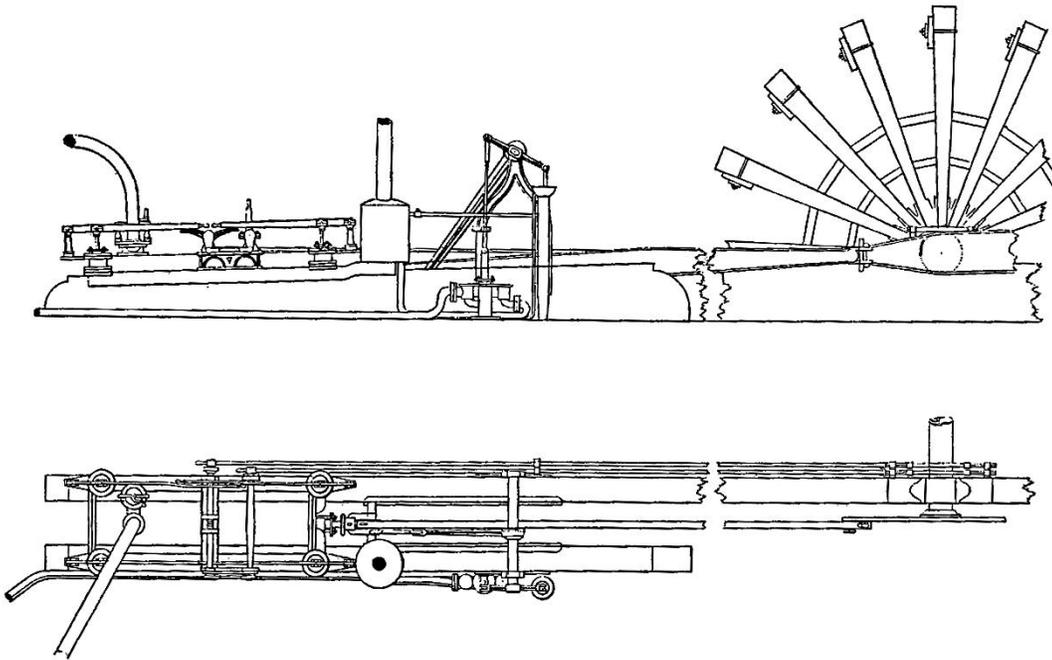


Figure 11: Diagram of a horizontal, direct-acting steam engine from a western river steamboat, 1837. (Hunter 1993, 140; originally from Hodge 1840)

When work on *Anthony Wayne* was completed in the spring of 1849, the overhauled steamboat was said to be as good as new. The side-wheeler was once more meant for both passenger and cargo transportation across Lake Erie. Due to the extensiveness of the improvements, the vessel's measurements changed slightly: 155 ft. (27.24 m) in length, 27 ft. 4 in. (8.33 m) in beam, 10 ft. (3.05 m) depth of hold, and a new registered tonnage of 400 80/95 tons.²⁶¹ According to the enrollment documentation, the refurbished *Anthony Wayne* featured one mast, no stern gallery, and

²⁶¹ 1849 Enrollment (Appx. B).

no figurehead.²⁶² The enrollment also states that the steamboat had only one deck, a feature not typical or well suited for passenger carriers at the time.²⁶³ This fact is repeated on the 1850 enrollment, but is believed to be an error as the vessel was equipped with an upper deck when it sank in April 1850.²⁶⁴ Additionally, newspaper articles stated that the steamer had, “good cabin arrangements for passengers, and is well adapted to carry freight,” although capacities for each are lacking.²⁶⁵ Reports did indicate, however, that *Anthony Wayne* now featured mattresses for its steerage passengers, considered by some “a great improvement, which it would be well for other boats to follow.”²⁶⁶ Deck passengers usually had to contend with simple cots or hammocks, so the addition of mattresses in the steerage cabin speaks to the effort Howard was making to provide all passengers, regardless of economic status, a comfortable journey.²⁶⁷

Significant repairs and replacements were also made to *Anthony Wayne*’s machinery. The horizontal engine from *Columbus* was improved by James Menzes, the so-called ‘father of engineers,’ with new boilers constructed and installed by A. Wolcott and Company of Detroit, in addition to “everything pertaining to the furnance, pipes, etc” also being newly built.²⁶⁸ The steamboat had an opportunity to test its engine in late

²⁶² 1849 Enrollment (Appx. B).

²⁶³ 1849 Enrollment (Appx. B). It is possible that the upper cabin was not counted as a deck and therefore left off the enrollment.

²⁶⁴ 1850 Enrollment (Appx. B).

²⁶⁵ *Buffalo Commercial Advertiser* 23 April 1849, 2.

²⁶⁶ *Buffalo Commercial Advertiser* 25 April 1849, 2.

²⁶⁷ Hunter 1993, 423.

²⁶⁸ *Buffalo Commercial Advertiser* 25 April 1849, 2; *Sandusky Clarion* 30 April 1850 (GLHSC); *Sandusky Clarion* 5 May 1850. Also, the builders of the boilers are also referred to as Wolcott and Savage of Detroit.

April, making a short trip up into Lake St. Clair where it proved be a speedy craft, making a run of 7 miles (11.27 km) in only 30 minutes.²⁶⁹ This is 2 mph faster than its reported speed. With the rebuild of *Anthony Wayne* complete, the old favorite was ready to make its return to service on the lakes.

1849 Season

Anthony Wayne made its reappearance on Lake Erie in the 1849 navigation season. In March of that year, newspapers reported that the steamer planned to run in the newly established Buffalo-Toledo-Monroe line, along with *Southerner*, *Benjamin Franklin*, *DeWitt Clinton*, *Baltimore*, and *Julius D. Morton*.²⁷⁰ This line, one of six established routes on the lakes that year, was formed by stakeholders in the Michigan Central Railroad.²⁷¹ This allowed the steamboats to bring increased numbers of both passengers and cargo to Monroe, and permitted travelers to venture further into the West via the railroad.

In addition to a new route, *Anthony Wayne* also had a new captain during this season. Seasoned lakesman Captain I.T. Pheatt, late of the side-wheeler *Rochester*, was hired by Howard to command the rebuilt steamer.²⁷² Pheatt, a resident of Toledo, began his career as a master of steamboats in 1839 when he commanded the Maumee side-

²⁶⁹ *Buffalo Commercial Advertiser* 25 April 1849, 2.

²⁷⁰ *Buffalo Commercial Advertiser* 26 March 1849, 2.

²⁷¹ Mansfield 1899, 444; Hatcher 1945, 131.

²⁷² 1849 Enrollment (Appx. B); *Buffalo Commercial Advertiser* 6 May 1848 (MHGLC 2010). This name appears in several historical sources as 'J.T. Pheatt', and cannot be confirmed either way as the first name is not spelled out in any documents or sources consulted for this study.

wheeler *General Harrison*, owned by James Walcott and Company.²⁷³ In 1842, he captained the Toledo-built steamer *Indiana* where he enjoyed great success and popularity, earning such endorsements as, “there is not a better sailor and more gentlemanly officer on our lakes” (Fig. 12).²⁷⁴ This statement was echoed in a card signed by 74 passengers when Pheatt brought *Indiana* safely into Buffalo amidst ‘thick and heavy weather’ in June of 1842.²⁷⁵ Aside from his prowess as a lake navigator, Pheatt was also well known for his longer-than-average pleasure excursions around the lakes, making stops at Mackinac, Sault Ste. Marie, Green Bay, and the ‘Indian settlements’ of Wisconsin.²⁷⁶ The good captain’s gentlemanly conduct could not sway everyone, however. While in command of *Constitution* in 1847, the steamer’s owner, John Vail of Buffalo, sold the vessel to some businessmen at Monroe.²⁷⁷ Due to the rivalry between the cities of Toledo and Monroe, and with Pheatt being a staunch Toledo man, the owners promptly fired the steamer’s master upon the completion of the sale.²⁷⁸ Beyond this minor incident over municipal prestige, Pheatt was one of the most revered captains on all the lakes. In addition to *Anthony Wayne*, Pheatt also commanded the steamers *Northern Indiana* and *Western Metropolis* before his death in Toledo in 1859.²⁷⁹

²⁷³ Waggoner 1888, 438.

²⁷⁴ *Toledo Blade* 22 April 1842, 2.

²⁷⁵ *Toledo Blade* 17 June 1842, 2.

²⁷⁶ Downes 1868, 113.

²⁷⁷ Andrews 1879, 212-4.

²⁷⁸ Andrews 1879, 214-5.

²⁷⁹ Palmer 1906, 37.

TO THE TRAVELLING PUBLIC!
UNTIL FURTHER NOTICE, THE STEAM BOAT

1843.  1843.

INDIANA,
CAPT. I. T. PHEATT,

Will ply regularly during the present season, between Toledo and Buffalo, according to the following arrangement, touching at the intermediate ports each way.

leaves Toledo at 7½ A M		leaves Buffalo at 9 A M	
Saturday, July	8	Tuesday, July	11
Friday;	14	Monday,	17
Thursday "	20	Sunday "	23
Wednesday,"	26	Saturday "	29
Tuesday, Aug.	1	Friday, Aug.	4
Monday "	7	Thursday "	10
Sunday "	13	Wednesday	16
Saturday	19	Tuesday	22
Friday	25	Monday	28
Thursday	31	Sunday, Sept.	3
Wednesday, Sep.	6	Saturday	9
Tuesday	12	Friday	15
Monday	18	Thursday	21
Sunday	24	Wednesday	27
Saturday	30	Tuesday, Oct.	2

The INDIANA is a new boat of 600 tons burthen, propelled by a powerful low-pressure engine, finished in a superior style. She has good accommodations for steerage passengers; airy and commodious Ladies' and Gentlemen's Cabins and Saloons, with large and convenient state-rooms throughout—and for speed and comfort of accommodation is not surpassed by any boat on the western waters; and the public can, until further notice, rely upon her punctuality in making her trips.

For Freight or Passage, apply to the Captain on board, or to the following named agents:

PECKHAM & Co., Toledo.
H. C. WILLIAMS, Sandusky City.
FEASE & ALLEN, Cleveland.
GALLAGHER, Erie.
P. L. PARSONS & Co., Buffalo.

Toledo, July 6, 1843. 21-1f
Times, Fort Wayne, and Free Press Lafayette, will publish the above to the amount of \$3, and send bill to this office.

Figure 12: Steamboat *Indiana* advertisement and schedule, 1843. (*Toledo Blade* 4

August 1843, 3)

Anthony Wayne returned to work in late April 1849, with the papers announcing the steamer in commission after a “a year or two” hiatus.²⁸⁰ As already mentioned, *Anthony Wayne* ran on the newly-established Buffalo-Toledo-Monroe line, with Pheatt making a point of running the steamer on a very regular schedule. During its first full month of service back on Lake Erie, *Anthony Wayne* made the round trip between Toledo and Buffalo in seven days, departing Toledo mostly on Mondays.²⁸¹ The passenger and cargo carrier trekked eastward, making the trip to Buffalo in five days with stops at intermediate ports. The steamer departed that city the same day it arrived and headed back west, with the return leg of the excursion lasting only two days.

Pheatt was only with *Anthony Wayne* for a short time. By June 1849, he was no longer listed as the vessel’s captain, and a Captain Rossman took over as master. While newspaper accounts connected with *Anthony Wayne* during this year never explicitly give the first name of the captain, this gentleman is believed to be Captain Andrew W. Rossman of Glen Arbor, Michigan.²⁸² Born in 1817, not much is known of Rossman’s early life. He reportedly sailed the lakes for more than half a century, indicating his maritime career began some time in the 1840s.²⁸³ Rossman also held the honor of being the first commodore for the Northern Transportation Company, sailing nearly all 24 boats that comprised that line in its 30 years of operation.²⁸⁴ He also owned the side-

²⁸⁰ *Detroit Free Press* 3 May 1849 (BGSUC).

²⁸¹ *Buffalo Commercial Advertiser* May 1849; *Toledo Blade* May 1849.

²⁸² Rader 1977, 29. This assumption is based off a survey of historic newspaper articles and steamboat lists from Toledo, Buffalo, and Chicago. There is a possibility that the Rossman that commanded *Anthony Wayne* was not Andrew W., but this seems unlikely.

²⁸³ *The Evening Tribune* [Grand Haven, MI] 28 November 1892.

²⁸⁴ *The Evening Tribune* [Grand Haven, MI] 28 November 1892.

wheeler *Great Western* in 1850, and later commanded the steamers *Atlanta* and *Menominee*.²⁸⁵ Rossman was one of the oldest serving captains on the lakes, retiring in 1892 and dying on 27 November of the same year at the age of 75.²⁸⁶ There is some confusion about when Rossman came aboard *Anthony Wayne* as commander. The first mention of him as the steamer's captain dates to May from a report in the *Buffalo Daily Courier* announcing that the brig *Castalia* was safe after not being seen for some time.²⁸⁷ This conflicts with arrival and departure information listed in the *Toledo Blade* and *Buffalo Commercial Advertiser*, which both cite the master of *Anthony Wayne* as Pheatt.²⁸⁸ It is possible that Rossman was working alongside Pheatt during the first half of the 1849 season, but no primary sources have been found to confirm this.²⁸⁹ By July of this year, though, Rossman had sole command over *Anthony Wayne* and continued to run the steamer for the remainder of the season.

Another glimpse of the business being carried out by *Anthony Wayne* is offered by the *Buffalo Commercial Advertiser* which lists partial cargo manifests for vessels in 1849, highlighting some of the wide range of goods. On one particularly well-laden voyage in November, Rossman brought to Buffalo the following: 297 barrels of seed, 180 barrels of flour, 40 half barrels of buckwheat flour, 2 barrels of beans, 41 casks of

²⁸⁵ *Toledo Blade* 1 May 1850, 2; *The Evening Tribune* [Grand Haven, MI] 28 November 1892.

²⁸⁶ *The Evening Tribune* [Grand Haven, MI] 28 November 1892.

²⁸⁷ *Buffalo Daily Courier* 7 May 1849 (MHGLC 2010).

²⁸⁸ *Buffalo Commercial Advertiser* May 1849; *Toledo Blade* May 1849.

²⁸⁹ Rader (1977, 36-7) describes a seemingly fictitious argument, possibly based off historical fact, between Rossman and a Captain Pheatt over the terminus Northern Transportation Company railroad line. This particular Pheatt is described as being from Good Harbor, MI, so it is unlikely the same I.T. Pheatt who commanded *Anthony Wayne*, as that man was from Toledo. The Pheatt in the story, though, is described as a 40 year ship captain, which could sway the argument one way or the other.

ashes, 7 kegs of lard, 42 kegs of butter, 12 barrels of tallow, 74 barrels of pork, 15 bundles of pelts, 2 bales of wool, 300 live hogs, 300 live turkeys, 350 live chickens, 7 horses, 3 crates of glue, 3 boxes of furniture, 1 bundle of trees, 6 barrels of cranberries, 1 barrel of peaches, 21 casks of highwines, 2 boxes of books, 6 iron bars, and 1 sack of rags.²⁹⁰ This breaks down to 275 barrels, 40 half barrels, 62 casks, 49 kegs, 8 boxes and crates, several pieces of miscellaneous-sized cargo, and over 900 live animals. Before the rebuild, *Anthony Wayne* had cargo capacity for 1,500 barrels of freight, and even though the recalculated total is not known after undergoing refurbishment, it can be assumed that the increased tonnage coupled with the more compact engine increased the amount of cargo the steamer could carry. While the package freight being carried on this particular November run was relatively minimal, the sheer number of livestock being transported greatly made up for it. Unfortunately, these cargo lists do not indicate whether passengers were also being carried aboard the steamer, although it can be reasonably assumed that there were at least some onboard amongst the clucking and oinking. Other items carried by *Anthony Wayne* that season included beef, ham, eggs, cheese, apples, corn meal, paint, tobacco, leather, candles, roots, and wax.²⁹¹ From the amount of goods being shipped aboard the steamer, it seems as though it had no difficulty getting back into its old work routine.

While *Anthony Wayne* resumed daily operations, the steamboat twice encountered trouble in the year 1849. The first incident occurred on a foggy Friday in

²⁹⁰ *Buffalo Commercial Advertiser* 29 November 1849, 3.

²⁹¹ *Buffalo Commercial Advertiser* 1849.

early May, while still under command of Pheatt. When 6 miles (9.66 km) west of Dunkirk, cruising at a speed between 10 to 12 mph (16.09 to 19.31 kph), the vessel suddenly ran itself onto a rock reef under full steam and grounded.²⁹² Fortune smiled on the steamer, though, as “she backed off without the least perceptible injury, and as saucy as if she had conquered, and the rocks had suffered the most by the collision.”²⁹³ The steamer sustained no great damage and continued on its course without further issue or interruption. The second calamity that befell *Anthony Wayne* was much more severe. In late September or early October, as Rossman was making a usual run to Buffalo, one of the port-side boilers burst while the steamer was off Ashtabula, Ohio.²⁹⁴ The *Buffalo Commercial Advertiser* summed up the entire affair in a few lines: “The steamer *Anthony Wayne* on her last trip up, burst her boiler off Ashtabula, and had to put into that port where she lay for three days to repair.”²⁹⁵ The brief write-up suggests that neither the boat nor anyone on board sustained injury in the accident. The boiler reportedly fractured, and although it is unknown where this occurred or how big the break was, it was repaired with a patch.²⁹⁶ *Anthony Wayne* quickly recovered from this incident and was back underway, keeping a regular schedule for the remainder of the season.

Despite these two brushes with misfortune, *Anthony Wayne* had a very successful season in 1849. Under Pheatt and then Rossman, the steamer returned to the lakes with renewed vigor. The last report from this year is a departure notice indicating *Anthony*

²⁹² *Toledo Blade* 9 May 1849.

²⁹³ *Toledo Blade* 9 May 1849.

²⁹⁴ *Buffalo Commercial Advertiser* 3 October 1849, 2.

²⁹⁵ *Buffalo Commercial Advertiser* 3 October 1849, 2.

²⁹⁶ *Sandusky Clarion* 30 April 1850 (GLHSC).

Wayne left Buffalo for Toledo on 30 November 1849.²⁹⁷ Given the typical onset of foul weather and ice during this month, it is unlikely that the side-wheeler made any more trips after returning west.

1850 Season

The year 1850 proved to be the fateful year for the sided-wheel steamboat *Anthony Wayne*. Although its career would come to a close in April, first news of *Anthony Wayne* came from another accident involving the vessel while it was laid up in winter quarters. During the late hours of Saturday, 12 January, as the steamboat was moored at the dock of John Chester & Company in Detroit, ice floating in the river stove in a portion of the hull, causing the vessel to sink.²⁹⁸ It was raised, but there is no indication just how long *Anthony Wayne* sat on the bottom of the Detroit River or the extent of the damage. Nevertheless, Howard set out to repair the steamer before the commencement of the navigations season. The *Toledo Blade* subsequently reported that, “those who have seen the boat, since she has been repaired, [say] that she was never in finer trim for passenger accommodation.”²⁹⁹ *Anthony Wayne* prepared to start its last voyages out upon the lakes.

In April 1850, ownership of the side-wheeler changed slightly. Howard formed a partnership with Captain E.C. Gore, who would also become the steamer’s new master. Gore appeared as an owner on enrollment documents filed at Detroit that year, and it

²⁹⁷ *Buffalo Commercial Advertiser* 30 November 1849, 3.

²⁹⁸ *Buffalo Daily Republic* 14 January 1850 (MHGLC 2010).

²⁹⁹ *Toledo Blade* 10 April 1850, 2.

appears that he owned the minority of the shares compared to Howard.³⁰⁰ Not much is known of Gore from the historical record. He was 30 years old when in command of *Anthony Wayne* and generally known as “a brave and gallant seaman, universally esteemed on the lakes and on shore for his courteous and gentlemanly bearing towards all.”³⁰¹ While his career before *Anthony Wayne* remains a mystery, Gore later took command of the steamers *St. Louis* and *Julius D. Morton*.³⁰² He was a savvy and opportunistic businessman, as evidenced by a newspaper report. While master of *St. Louis* on a run from Cleveland to Detroit, Gore conspired with the captains of steamers *Southerner* and *Hendrick Hudson* to temporarily fix the rates for all three vessels so that no undercutting had to be done.³⁰³ In order to see the deal through to fruition, the clerks from all three boats swapped places, ensuring the proper fees would be charged. After “several narrow escapes upon the rough billows of our western waters,” Gore died unexpectedly in late June 1851 as a result of a burst blood vessel.³⁰⁴ While opinion of the captain seemed favorable at the time of his demise, Gore’s conduct during the final moments of *Anthony Wayne* were questioned (see Chapter 4).

Anthony Wayne’s 1850 route was not published prior to the start of navigation season. Steamboat arrangements between Toledo and Buffalo had been mostly finalized by the beginning of March and *Anthony Wayne* was not included amongst the other

³⁰⁰ 1850 Enrollment (Appx. B). *Daily Sanduskian* (29 April 1850, 2) states Charles Howard owned four-fifths of the vessel, while *Toledo Blade* (1 May 1850, 2) and Mansfield (1899, 660) both cite him as owning three-fourths, leaving Gore owning the remainder.

³⁰¹ *Sandusky Clarion* 2 May 1850; *DePere* [WI] *Advertiser* 2 July 1851.

³⁰² *Manitowoc County* [WI] *Herald* 5 April 1851; *DePere* [WI] *Advertiser* 2 July 1851.

³⁰³ *Manitowoc County* [WI] *Herald* 5 April 1851.

³⁰⁴ *Daily Free Democrat* [Milwaukee] 27 June 1851; *DePere* [WI] *Advertiser* 2 July 1851.

boats. The fleet did include, however, the steamers *Troy*, *Superior*, *DeWitt Clinton*, *Queen City*, *Southerner*, and *Baltimore*.³⁰⁵ Not until the second week of April did the owners of *Anthony Wayne* make their intentions known, when they advertised the steamer rejoining the old familiar shipping line between Buffalo and Toledo.³⁰⁶ In order to maximize earnings, Howard and Gore went to great lengths to advertise the steamer, making sure the public knew that *Anthony Wayne* was a “fast steamer,” and a “first class boat,” properly equipped to handle both passenger travel as well as freight (Figs. 13, 14).³⁰⁷

FOR BUFFALO.
 The Splendid Steamboat **ANTHONY WAYNE**, Capt. E. C. Gore will leave Toledo for Buffalo, on Saturday morning the 13th inst., at 9 o'clock A. M. The *Wayne* has been entirely rebuilt, and is now in every respect a *first class Boat*.

Figure 13: *Anthony Wayne* advertisement from the 1850 season. (*Toledo Blade* 13 April 1850, 2)

³⁰⁵ *Buffalo Commercial Advertiser* 7 March 1850, 2.

³⁰⁶ *Toledo Blade* 10 April 1850, 2.

³⁰⁷ *Toledo Blade* 13 April 1850, 2; 26 April 1850, 2.

ARRANGEMENT FOR THE SEASON.



The Fast Steamer **ANTHONY WAYNE**, E. C. GORE, Master, leaves Toledo every Saturday morning at 9 o'clock.
Leaves Buffalo every Wednesday evening at 7 o'clock.
This boat has been thoroughly rebuilt at Trenton, Michigan, in 1849. For freight or passage apply on board, or to
MORTON, WING & CO.
Toledo, April 26, 1850

Figure 14: *Anthony Wayne* advertisement from the 1850 season. (*Toledo Blade* 27 April 1850, 2)

Anthony Wayne began the season on 13th of April when the steamer made its way from Detroit to Toledo in order to resume Buffalo-Toledo service.³⁰⁸ In a change from the previous year, the steamer no longer ran up to Monroe as it once had, instead focusing solely on the route along the southern Lake Erie coast. Gore was scheduled to depart Toledo on Saturday mornings at 9:00 am and depart Buffalo on Wednesday evening at 7:00 pm.³⁰⁹ *Anthony Wayne* completed two round trips on Lake Erie in April 1850. On Friday, 26 April, after making port in Toledo, Gore was cleared the same day for departure back to Buffalo, but *Anthony Wayne* did not actually start the voyage until Saturday morning.³¹⁰ This is the last daily marine intelligence featuring the steamer, as all subsequent entries have to do with the vessel's demise.

³⁰⁸ *Toledo Blade* 13 April 1850, 2.

³⁰⁹ *Toledo Blade* 26 April 1850, 2.

³¹⁰ *Toledo Blade* 26 April 1850, 2.

Over its 13-year career, *Anthony Wayne* certainly enjoyed more success than failure. From its lavish accommodations to the gentlemanly officers that graced the decks, *Anthony Wayne* was a favorite amongst the passengers traveling on the Great Lakes. The vessel suffered its share of casualties through the years, but always came out on top. *Anthony Wayne* appears to have been more than just a mere boat. It had a distinctive personality, equal parts of charisma and charm that persisted, even under different management, throughout its career.

CHAPTER IV
THE SINKING OF *ANTHONY WAYNE*

All Aboard for Buffalo

In the early morning hours of Saturday, 27 April 1850, Gore prepared to make his way back east over the length of Lake Erie. His seasonal arrangement called for the captain to leave Toledo at 9:00 am and hopefully make port in Buffalo some time on Tuesday, stopping at intermediate ports along the way for passengers, cargo, and fuel. Approximately 30 travelers booked passage aboard *Anthony Wayne* that morning, 20 of them cabin passengers and 10 steerage.³¹¹ The steamer also carried 500 barrels of freight, consisting of pork, ashes, seed, lard, butter, and other sundries.³¹² Once fares were paid and passengers settled, Gore gave the command to depart. With a compliment of 30 crew members, *Anthony Wayne* finally made its way out of Toledo around 9:30 am, slightly behind schedule (Table 8).³¹³

³¹¹ *Toledo Blade* 29 April 1850, 3.

³¹² *Buffalo Commercial Advertiser* 1 May 1850, 2.

³¹³ *Daily Sandusian* 30 April 1850, 2; *Buffalo Commercial Advertiser* 1 May 1850, 2.

Table 8: Crew members aboard *Anthony Wayne*'s final voyage.

Name	Position	Hometown	Status after Explosion
Charles Anderson	Barber	-	Survived
Mead, A.H.	Asst bar-keeper	Detroit, MI	Deceased
Gore, E.C.	Captain	Detroit, MI	Survived
McCoy, Jane	Chamber-maid	Buffalo, NY	Survived
Vorce, Henry G.	Clerk	Detroit, MI	Survived
Robinson, Willey	Cook, 1 (head)	Detroit, MI	Deceased
Williamson, John	Cook, 2	Detroit, MI	Deceased
Kelley, Henry	Cook, 3	Detroit, MI	Deceased
Freeman, Franklin	Deckhand, 1	Detroit, MI	Deceased
Cartwright, Alexander	Deckhand, 2	Trenton, MI	Deceased
Blow (Blon, Slow), Henry	Deckhand, 3	Trenton, MI	Dangerously Wounded
Blow (Blon, Slow), Anthony	Deckhand, 4	Trenton, MI	Survived
Sturgis, Alexander	Deckhand, 5	-	-
Elmore, Jeremiah J.	Engineer, 1 st	Sandusky, OH	Deceased
Burchard, Edward	Engineer, 2 nd	Collins, NY	Deceased
Brainard, John	Fireman, 1	-	Dangerously Wounded
O'Neil, James	Fireman, 2	-	Badly Scalded
Sullivan, Thomas	Fireman, 3	-	Survived
Williams, John	Fireman, 4	Detroit, MI	Survived (later died)
Kimball, Jason	Fireman, 5	-	Survived
Edgcomb, James E.	Mate, 1 st	Trenton, MI	Survived
Starkweather, James H.	Mate, 2 nd	-	Survived
Parsons, Whitney	Porter, 1 (head)	Gibraltar, MI	Badly Scalded
Greenbalgh, Joseph	Porter, 2	Brest, MI	Survived
Freeman, Hiram	Saloon-keeper	-	Survived
Sturgis, Henry	Steward	Mt. Clemens, MI	Deceased
Unknown	Waiter, 1 st	Detroit, MI (Canada?)	Missing
Unknown	Waiter, 2 nd	Buffalo, NY (Oswego?)	Missing
Johnson, John	Wheelsman, 1 st	Detroit, MI	Survived

Table 8. Continued.

Name	Position	Hometown	Status after Explosion
Maywill, Anthony	Wheelsman, 2 nd	Detroit, MI	Survived

Of the passengers who got on *Anthony Wayne* at Toledo, most were family groups. Edwin Kellogg, his wife and their three children boarded the steamboat; they were relocating from their home in Toledo to Cleveland.³¹⁴ An unnamed woman and her small child were traveling from St. Louis to Waterloo, Ontario, in the company of her two male cousins, described as large-sized men with sandy hair, bound for Buffalo.³¹⁵ G.W. Gunn, of Toledo, with his wife and two children, booked passage eastward.³¹⁶ There was also a family traveling under melancholy circumstances; Archer Brackney, of Lafayette, Indiana, was traveling with his five year old daughter and two and a half year old son, in addition to the remains of his recently deceased wife and stillborn child.³¹⁷ They were headed to Philadelphia to see relatives and lay their loved ones to rest.

In the early afternoon, the side-wheeler made port in Sandusky, approximately 60 miles (96.56 km) east of Toledo. Here, *Anthony Wayne* waited all day for the evening trains to come in from Cincinnati and Mansfield. According to passenger Brackney, there was also lot of drinking and rough talk taking place in the steamer's saloon, so much so that two passengers nearly came to blows.³¹⁸ No injuries or damages were

³¹⁴ *Daily Sanduskian* 30 April 1850, 2.

³¹⁵ *Buffalo Commercial Advertiser* 1 May 1850, 2; *Daily Sanduskian* 3 May 1850, 2.

³¹⁶ *Daily Sanduskian* 30 April 1850, 2; 3 May 1850, 2.

³¹⁷ *Daily Sanduskian* 30 April 1850, 2; *Buffalo Commercial Advertiser* 1 May 1850, 2; *Daily Sanduskian* 3 May 1850, 2.

³¹⁸ *Daily Sanduskian* 30 April 1850, 2.

reported, however. This was the only recorded instance of fighting onboard, with the remainder of the afternoon being void of any notable occurrences.

Anthony Wayne was not the only vessel waiting at Sandusky. The side-wheeler *Superior*, also built at Perrysburg and under the command of Captain David Wilkinson, was likewise hoping to capitalize on travelers coming in with the trains.³¹⁹ In an effort to sway would-be patrons, representatives from *Anthony Wayne* were reportedly charging reduced passenger fare, thereby undercutting *Superior*.³²⁰ When the last train finally made its way into Sandusky at 9:00 pm, approximately 25 persons from the railcars boarded Gore's boat, which yielded a total of 40 passengers that got on at that city, bringing the number of all passengers to 70.³²¹ The tactic of cutting fares worked, as it is stated that *Anthony Wayne* took on more people than *Superior*, although specific numbers were not given.³²² In addition to passengers, the steamer also took on 300 barrels of high-wines and whiskey intended for markets further eastward.³²³ Around 10:00 pm, *Anthony Wayne* pulled away from port just behind the steamer *Superior*, already 0.5 miles (0.81 km) ahead.³²⁴ The side-wheeler was next due to stop in Cleveland, arriving there during early morning on Sunday.

³¹⁹ *Buffalo Commercial Advertiser* 3 March 1850, 2;

³²⁰ *Toledo Blade* 3 May 1850, 3.

³²¹ The total number of passengers on board *Anthony Wayne* varies with each historical source, although the consensus falls between 60 and 70 passengers. David A. Eddy (*Toledo Blade* 2 May 1850, 3) stated there were 25 cabin passengers, 20 steerage passengers, and 17 arrivals from the Cincinnati train, yielding a passenger total of 62. The *Daily City Queen* [Buffalo, NY] (1 May 1850) reported 60 passengers being onboard at the time of the accident, while Gore (*Toledo Blade* 1 May 1850, 2) recalled taking on between 80 and 90 passengers. Both the *Buffalo Commercial Advertiser* (1 May 1850, 2) and *Daily Sanduskian* (3 May 1850, 2) reported 47 known passengers onboard at the time of the disaster, but the former also give the number 63 in the same article.

³²² *Daily Sanduskian* 29 April 1850, 2.

³²³ *Toledo Blade* 1 May 1850, 2.

³²⁴ *Daily Sanduskian* 30 April 1850, 2.

Anthony Wayne received a fair number of passengers at Sandusky, but only three of the approximately 40 travelers who got on at this port are known. Passenger Caroline Kimball, of Springfield, Ohio, stepped foot on the side-wheeler with her small child, but their intended destination is unknown.³²⁵ Additionally, passenger Charles J. Smith also boarded at Sandusky to return to his home in Hinsdale, Massachusetts.³²⁶ Before securing passage, though, Smith toured the vessel twice to make sure all was as it should be, and once satisfied settled down in State Room M.³²⁷

Several other named travelers were on *Anthony Wayne*'s final voyage, although it is unclear where they boarded the vessel. Passenger David A. Eddy, a prominent Cleveland lawyer, making his way home, took a state room in the stern of the steamer, in addition to passengers C.O. Mollen and Henry B. Pettinger, auctioneers who were also from that city.³²⁸ Passenger John Ellis, his wife and two young children, from Fort Wayne, Indiana, were on board, likely in the steerage cabin.³²⁹ An unnamed English woman was traveling from St. Louis to Galt, Ontario. Another unknown female, dressed in black after her husband passed away in Cincinnati, was on her way to stay with friends in New York State.³³⁰ Several other individuals rounded out the patrons aboard *Anthony Wayne* that evening, most of who retired for the evening once the steamer was under way (Table 9).

³²⁵ *Daily Sanduskian* 30 April 1850, 2.

³²⁶ *Daily Sanduskian* 30 April 1850, 2.

³²⁷ *Daily Sanduskian* 30 April 1850, 2.

³²⁸ *Cleveland Daily Herald* 29 April 1850 (GLHSC); *Daily Sanduskian* 29 April 1850, 2.

³²⁹ *Buffalo Commercial Advertiser* 1 May 1850, 2; *Daily Sanduskian* 3 May 1850, 2.

³³⁰ *Daily Sanduskian* 30 April 1850, 2.

Table 9: List of known passengers aboard *Anthony Wayne*'s final voyage.

Name	Hometown	Destination	Status
Balcomb, D.	Cleveland, OH		Survived
Brackney, Archer	Lafayette, IN	Philadelphia	Survived
Brackney, Emeline	Lafayette, IN	Philadelphia	Survived
Brackney, son of Archer	Lafayette, IN	Philadelphia	Deceased
Bradley, John	Cleveland, OH		Slightly Scalded
Cavanaugh (Kavanaugh), Edward	Troy, NY		Survived
Cray, John S.	Louisville, KY		Badly Wounded
Doty, J.W.	Warsaw, IL (formerly Auburn, NY)		Deceased
Eddy, David A.	Cleveland, OH		Survived
Ellis, child of John	Fort Wayne, IN		Deceased
Ellis, John	Fort Wayne, IN		Survived (unknown)
Ellis, Mrs. John	Fort Wayne, IN		Deceased
Ellis, son of John	Fort Wayne, IN		Badly Wounded
Fairchild (Fairfield), John	Fort Wayne, IN		Survived
Falkner (Falconer, Faulkner), Mathew	Sheffield, MA		Slightly Scalded
Fitch, Lafayette	Peru, Huron Co., OH		Survived
Gray, Alfred W.	Stillwater, NY		Badly Wounded
Gunn (Gann), 1 st child of H.W.	Toledo, OH		Survived
Gunn (Gann), 2 nd child of H.W.	Toledo, OH		Survived
Gunn (Gann), H.W.	Toledo, OH		Survived
Gunn (Gann), Mrs. H.W.	Toledo, OH		Survived
Hart, assistant to	Perrysburg, OH		Unknown
Hart, O.W. (drover)	Perrysburg, OH		Deceased
Hawkins, James	St. Catharines, Windsor, CAN		Unknown
Holbrook, Presley H.	Buffalo, NY		Unknown
Joflin, J.H.	Chittenden Co., VT		Dangerously Wounded

Table 9. Continued.

Name	Hometown	Destination	Status
Kelley, Charles	London, Windsor, CAN		Unknown
Kellogg, 1 st child of Edwin	Lafayette, OH	Cleveland	Survived
Kellogg, 2 nd child of Edwin	Lafayette, OH	Cleveland	Survived
Kellogg, 3 rd child of Edwin	Lafayette, OH	Cleveland	Survived
Kellogg, Edwin (Edmund)	Lafayette, OH	Cleveland	Survived
Kellogg, Mrs. Edwin	Lafayette, OH	Cleveland	Survived
Kelly, 1 st child of Edward	Unknown	Cleveland	Survived
Kelly, 2 nd child of Edward	Unknown	Cleveland	Survived
Kelly, Edward	Unknown	Cleveland	Survived
Kelly, Mrs. Edward	Unknown	Cleveland	Survived
Kimball, Caroline	Springfield, OH		Survived
Kimball, child of Caroline	Springfield, OH		Survived
Lawrence, C.G.	Angelica, NY		Badly Wounded
McDonagh (McDonough), Henry	Trenton, MI		Slightly Scalded
Mollen, C.O.	Cleveland, OH		Survived
Palmer, John	Springfield, OH		Unknown
Pern, Fitch	Unknown		Survived
Pettinger, Henry B.	Cleveland, OH		Survived
Shay, Robert	Dayton, OH		Dangerously Wounded
Smith, Charles J.	Hinsdale, MA		Survived
Smith, Mr.	Cincinnati, OH		Survived
Smith, Mrs.	South of Cleveland		Survived
Tierney, John	Louisville, KY		Badly Wounded
Titus, Myron	Dayton, OH		Deceased
Unknown	St. Louis, MO		Survived
Unknown Female	Toledo, OH		Survived
Unknown Female		Waterloo, Ontario	Missing
Unknown Female (English)	St. Louis	Galt, Ontario	Deceased

Table 9. Continued.

Name	Hometown	Destination	Status
Unknown Female (widow)	Cincinnati, OH	New York State	Deceased
Unknown Male, cousin to Female		Buffalo, NY	Missing
Unknown Male, cousin to Female		Buffalo, NY	Missing
Unknown Female child of		Waterloo, Ontario	Missing
Van Horne, Col. Daniel E.	Alton, IL		Survived
Waggoner, John C.	Cleveland, OH		Survived
Walker, Mathew (Likely Faulkner)	Sheffield, MA		Badly Wounded
Wolf, J.	Fort Wayne, IN		Dangerously Wounded
Wood, James	Oxford, OH		Survived
Wool, John	Oxford, OH		Survived
McArthur, S.B.	Oswego, NY		Deceased

Although it was still early in the navigation season, temperatures on the lake were pleasant. Another vessel could be seen steaming ahead of *Anthony Wayne*, the side-wheeler *Superior*. Passenger Charles J. Smith claimed he heard one of the crewmen state that *Anthony Wayne* would overtake *Superior* before reaching Cleveland.³³¹ This is corroborated by a later report that stated Gore ordered first engineer Jeremiah J. Elmore to increase the amount of steam in the engine in order to pass *Superior*.³³² Elmore informed the captain the boat was running on all the steam it could. After hearing talk of overtaking *Superior*, second mate James H. Starkweather asked Elmore if they would be successful in passing the steamboat, to which he replied, “No, we can do nothing with

³³¹ *Daily Sandusian* 30 April 1850, 2.

³³² *Toledo Blade* (3 May 1850, 2) reported this statement, but its source is not credited and thus its authenticity is questionable.

that boat.”³³³ The engineer went on to tell Starkweather that the vessel was running short on coal and that they might not have enough to make it to Cleveland. In order to make the limited fuel supply last, Elmore took to wetting the remaining coal to ensure the steamboat would at least make it to Cleveland.³³⁴

At 12:00 am all was quiet as *Anthony Wayne* continued on its east-by-southeast course for Cleveland. The watch changed as soon as the steamer exited Sandusky Bay, and with everything in order Gore retired for the evening, leaving Starkweather in charge of the deck and Elmore the engine.³³⁵ The lake was flat, with hardly any wind and no signs of foul weather on the horizon. The prospect of a smooth trip seemed high.

Around 12:30 am, some of the passengers reported feeling the boat start to tremble. Passenger Edwin Kellogg and his family, all of whom went to bed early, were awakened by the steamboat shaking forcefully.³³⁶ Kellogg felt as though the trembling was a result of the vessel moving faster. This sensation was reportedly not felt by any other individuals, however. Not wanting to leave the cabin to check the source of the trembling, Kellogg concluded it was the result of turbulent seas.

Near the same time, Elmore and two of the firemen went below decks to check the amount of water in the boilers. Fireman John Williams checked three of the boilers personally, noting two stop cocks on one side and three on the other were all flush, thereby indicating a sufficient amount of water inside; another fireman checked the

³³³ *Daily Sanduskian* 30 April 1850, 2.

³³⁴ *Daily Sanduskian* 29 April 1850, 2.

³³⁵ *Daily Sanduskian* 30 April 1850, 2; *Buffalo Commercial Advertiser* 1 May 1850, 2.

³³⁶ *Daily Sanduskian* 30 April 1850, 2.

fourth boiler and also found appropriate water levels.³³⁷ Williams did, however, inform Elmore of a small leak emanating out of one of the boilers, who replied it was not dangerous due to the small amount of steam being generated, between 75 and 80 lbs.³³⁸ This was not new or surprising for the engineer, as he had informed Gore of the weak spot on their last trip out of Buffalo a few days before.³³⁹ Everything else in the engine room appeared to be in order.

“We Are Blown Up!”

At approximately 12:45 am on Sunday, 28 April 1850, some 7 miles (11.27 km) north of Vermilion, disaster befell *Anthony Wayne*.³⁴⁰ As Starkweather and the saloon keeper, Hiram Freeman, were at the bow engaged in conversation, the two starboard boilers violently exploded.³⁴¹ Sparks and steam filled the air as pieces of flying wood and debris scattered in all directions. The force of the blast caused the chimneys and pipes to fall, and pitched the boat into a “perpendicular position,” throwing most individuals painfully from their berths.³⁴² The steerage cabin, located on the main deck directly above the boilers, was blown apart in an instant, leaving a chasm of shattered woodwork 60 ft. (12.29 m) long down the center of the boat.³⁴³ This area had comprised

³³⁷ *Daily Sanduskian* 30 April 1850, 2.

³³⁸ *Daily Sanduskian* 30 April 1850, 2.

³³⁹ *Toledo Blade* 3 May 1850, 2.

³⁴⁰ The exact time of the explosion is not precisely known, as reports are conflicting. Crew members interviewed during the Coroner’s Inquest (*Daily Sanduskian* 30 April 1850, 2) and the Justice of the Peace Examination (*Daily Sanduskian* 2 May 1850, 2) put the time of the disaster between 12:30 am and 1:00 am, however some passengers and crew state the explosion took place in the 1:00 am hour.

³⁴¹ *Buffalo Commercial Advertiser* 1 May 1850, 2.

³⁴² *Cleveland Daily Herald* 29 April 1850 (GLHSC); *Buffalo Commercial Advertiser* 1 May 1850, 2;

³⁴³ *Toledo Blade* 2 May 1850, 3.

the saloon, staircases, and open berths.³⁴⁴ Situated next to the steerage cabin were the captain's quarters, which suffered a similar fate; the very bed Gore was sleeping on overturned in a mass of splinters.³⁴⁵ This destruction was not only a result of the explosion itself, but also from the two boilers launching upwards out of the ship's hold. One of the boilers landed in the water nearby while the other found its way onto the main deck, laying athwartships and spewing steam, scalding everyone in its proximity.³⁴⁶ A fire soon broke out in the vicinity of the displaced boiler on deck and spread to other parts of the boat, fueled in part by the cargo of alcohol being carried on board.

Immediately after the explosion, both crew and passengers struggled to make sense of what had happened. Starkweather, still at the bow, exclaimed to Freeman that "we are blown up," and commenced ringing the vessel's bell.³⁴⁷ The steamer was listing to starboard and clearly down by the head, a terrifying sign that *Anthony Wayne* was sinking. First mate James E. Edgcomb, asleep at the time of the explosion, quickly made his way on deck and realized the vessel was in imminent danger. As the stern section slowly started to rise, he set out to free the steamer's life-boats. The starboard life-boat had been obliterated, but Edgcomb, with passengers Eddy and Brackney, freed the second one trapped between the wheelhouse and cabin beneath the jib.³⁴⁸ Starkweather

³⁴⁴ *Toledo Blade* 2 May 1850, 3.

³⁴⁵ *Cleveland Herald* 29 April 1850 (GLHSC); *Daily Sanduskian* 30 April 1850, 2; *Toledo Blade* 1 May 1850, 2.

³⁴⁶ *Cleveland Herald* 29 April 1850 (GLHSC); *Daily Sanduskian* 30 April 1850, 2; *Buffalo Commercial Advertiser* 1 May 1850, 2.

³⁴⁷ *Buffalo Commercial Advertiser* 1 May 1850, 2.

³⁴⁸ *Cleveland Herald* 29 April 1850 (GLHSC); *Daily Sanduskian* 30 April 1850, 2.

and crewmen worked at lowering the yawl boat located at the steamer's stern, the only other small boat on board.

With their realization that *Anthony Wayne* was going down, passengers and crew began to jettison as many floatable objects as possible. At about this time, Gore emerged from his ruined state room uninjured and ran down into the vessel's hold, which he found flooded with 4 ft. (1.22 m) of water.³⁴⁹ The captain returned to the deck, yelled to the crew to "trim her up" as well as to throw floats and get on them, at which point he leapt from the vessel himself.³⁵⁰ Stricken with panic by the encroaching fire and the rapidly sinking vessel, people quickly followed the captain's lead. One man fastened two pillows beneath his arms and hurled himself overboard, while Caroline Kimball tied her child directly to herself and opted to stay on deck near the pilot house.³⁵¹ D.A. Eddy grabbed cabin doors and mattresses which he threw up upon the hurricane deck, where he soon after lashed the two together and made his way off the wreckage.³⁵² C.J. Smith managed to throw the dining table into the water, which four people quickly climbed onto, one of them being Gore.³⁵³ Fearing for the lives of his two children and seeing the captain already in the water, necessity forced Archer Brackney to launch the coffin containing the remains of his deceased wife and child, where upon he and his two children clung for their lives.³⁵⁴ Edgcomb and Starkweather launched the yawl and climbed in, then tried to pick up nearby persons already in the water. Not wanting to get

³⁴⁹ *Cleveland Herald* 29 April 1850 (GLHSC).

³⁵⁰ *Daily Sanduskian* 30 April 1850, 2; *Buffalo Commercial Advertiser* 1 May 1850, 2.

³⁵¹ *Daily Sanduskian* 30 April 1850, 2.

³⁵² *Toledo Blade* 2 May 1850, 3.

³⁵³ *Daily Sanduskian* 30 April 1850, 2.

³⁵⁴ *Daily Sanduskian* 30 April 1850; *Buffalo Commercial Advertiser* 1 May 1850, 2.

caught in the suction created by the sinking mass, the mates quickly rowed away from the wreckage.

Shattered and ablaze, the steamer dipped further into the water. A loud and ominous sound emanated from the lower reaches of the doomed steamboat, followed by a harsh cracking sound throughout the vessel as the heavier hull and machinery separated from the superstructure. The ship's barber, Charles Anderson, assisted in this process by kicking out some of the stanchions that held the hurricane deck above the main deck.³⁵⁵ As the lower portion of the boat continued its downward plummet, the hurricane deck floated 2 ft. (60.96 cm) above the water, albeit in two separate pieces.³⁵⁶ The screams and cries of the terrified people mingled with the harsh noises of cracking wood and twisting metal. To add to the unfolding destruction, the vessel also lost its mast at this time, which along with its spars fell to starboard, close to the wreckage that once constituted the forward cabin. Struggling on his wife's coffin, passenger Brackney lost his grip and was forced back into the water with his children, where he tried desperately to keep the little ones from drowning.³⁵⁷ Despite the chaos, the floating superstructure stayed fastened over the submerged hull, held by the tiller and wheel chains at the stern, and the shrouds and other rigging at the bow.³⁵⁸ To the amazement and horror of all still alive, *Anthony Wayne* had sunk to the bottom of Lake Erie only 15 to 20 minutes after the explosion.³⁵⁹

³⁵⁵ *Daily Sanduskian* 29 April 1850, 2.

³⁵⁶ *Cleveland Herald* 29 April 1850 (GLHSC).

³⁵⁷ *Daily Sanduskian* 30 April 1850, 2; *Buffalo Commercial Advertiser* 1 May 1850, 2.

³⁵⁸ *Daily Sanduskian* 29 April 1850, 2; *Cleveland Herald* 29 April 1850 (GLHSC); *Buffalo Commercial Advertiser* 1 May 1850, 2.

³⁵⁹ *Cleveland Herald* 29 April 1850 (GLHSC); *Daily Sanduskian* 30 April 1850, 2.

Under the light of the moon, survivors fought for their lives. With the fire extinguished by the lake and the hurricane deck still floating, the majority of survivors clamored upon it to escape the dark, cold waters. Gore climbed into the lifeboat with other passengers and crew, but the small craft leaked badly and required constant bailing to keep it afloat.³⁶⁰ Edgcomb and Starkweather, having taken the yawl away from the sinking steamer, came back to the floating wreckage to assist those who could not make it out of the water on their own. The yawl circled around both sections of wreckage two or three times, helping the displaced into the boat. They made sure everyone, both living and dead, was at least on top the floating structures.³⁶¹ On one of the yawl's passes to pick up ladies stranded near the forward hurricane deck, two or three men jumped in, severely rocking the vessel and causing water to be taken on. Fearful that the small boat might swamp, the mates pushed away from the deck.³⁶² As they drifted just off the wreck, a fireman by the name of Anthony Blow, secured to floating debris some 200 ft. (60.96 m) away, hailed the yawl. He pleaded with Edgcomb save him and not to let one of his men perish. "You are well enough off," replied the first mate. "There are many more worse off than you are."³⁶³ After the yawl made its final pass around the site, passenger C.J. Smith reported seeing 12 persons crowded together on the forward deck and another 17 upon the stern.³⁶⁴

³⁶⁰ *Cleveland Herald* 29 April 1850 (GLHSC); *Daily Sanduskian* 30 April 1850, 2.

³⁶¹ *Buffalo Commercial Advertiser* 1 May 1850, 2.

³⁶² *Daily Sanduskian* 30 April 1850, 2.

³⁶³ *Daily Sanduskian* 30 April 1850, 2.

³⁶⁴ *Daily Sanduskian* 30 April 1850, 2.

With nearly everyone safely out of the water, the two mates contemplated their next move. The captain ordered Edgcomb to take the yawl and go for assistance, taking with him all he could, and “for God’s [sake] save the ladies!” Edgcomb scoured the darkness for any signs of a nearby vessel. The steamer *Superior* was 4 or 5 miles (6.44 to 8.41 km) to the east and headed away from them. To the west, however, he spotted the dim lights of a vessel, about 3 or 4 miles (4.83 to 8.41 km) off and coming toward their general position.³⁶⁵ He yelled to Gore that he would make his way toward the ship. With 11 other persons crowded into the yawl, Edgcomb started away from the wreck.³⁶⁶

Gore also did not stay with *Anthony Wayne* for long after the sinking. Four individuals quickly climbed into the lifeboat along with the captain, those being the clerk, Henry C. Vorce, fireman Tom Sullivan, and two unknown passengers.³⁶⁷ Passengers called after the captain to save them, while other male travelers promised not to swamp the boat if he would just rescue the women.³⁶⁸ The lifeboat itself was in dire straits, though, and it took two men constantly bailing with hats to keep the vessel from joining *Anthony Wayne*.³⁶⁹ The captain could do nothing more for the survivors on the scene, and realized the best hope for those injured rested on securing help. Ten minutes after the sinking, Gore and his companions in the lifeboat began to make their way to shore.³⁷⁰ The paddles were either missing or destroyed, leaving the captain to use a

³⁶⁵ *Daily Sanduskian* 30 April 1850, 2.

³⁶⁶ *Daily Sanduskian* 30 April 1850, 2; *Toledo Blade* 2 May 1850, 2.

³⁶⁷ Edgcomb recounted seeing three passengers in the lifeboat with Gore, but the fireman actually in the boat stated there were only two.

³⁶⁸ *Daily Sanduskian* 30 April 1850, 2.

³⁶⁹ *Cleveland Herald* 29 April 1850 (GLHSC); *Daily Sanduskian* 30 April 1850, 2.

³⁷⁰ *Daily Sanduskian* 30 April 1850, 2.

board to propel the small boat. On his way off the site, Gore picked up fireman Blow, who was still floating on debris away from the main wreckage.³⁷¹

With the mates attempting to hail the craft off to the west and the captain racing to shore, the survivors waited in the darkness for rescue. Many had sustained injuries and some were clad only in thin night clothes. Panic soon gave way to disbelief and despair. Passenger Eddy, floating upon his make-shift raft, made his way between the forward and aft sections of decking to ensure everyone was fairing as best they could.³⁷² While passing around the forward deck, he noticed a woman tangled beneath the fallen mast, exhibiting no signs of life. Collapsed on the deck amongst female passengers, first engineer Elmore, suffered in incredible agony due to burns he sustained from the boiler explosion. Nothing could be done for him. Someone fished out a demijohn of wine floating nearby and shared it with the survivors.³⁷³ The wind was faint, the water calm, and the moon bright, offering some consolation to the sufferers.³⁷⁴ Stranded in the middle of the lake, they could do nothing but pray for help to arrive.

Assistance eventually arrived; Edgcomb piloted the yawl throughout the early morning hours, keeping the lights of the east-bound vessel always in sight. Around 3:00 am, after hours of rowing, they were successful in hailing the craft, which proved to be the schooner *Elmina*, commanded by Captain Nugent.³⁷⁵ Once informed of the situation, Nugent wasted no time in setting a course for the sunken steamer. At 6:00 am, *Elmina*

³⁷¹ *Daily Sanduskian* 30 April 1850, 2.

³⁷² *Toledo Blade* 2 May 1850, 3.

³⁷³ *Toledo Blade* 2 May 1850, 3.

³⁷⁴ *Daily Sanduskian* 30 April 1850, 2.

³⁷⁵ *Daily Sanduskian* 30 April 1850, 2; *Buffalo Commercial Advertiser* 1 May 1850, 2.

reached the wreck site and quickly launched its small boat, along with the yawl from *Anthony Wayne*, to gather both the living and the dead.³⁷⁶ Deceased taken aboard the schooner included the first cook, Willey Robinson, and passengers O.W. Hart, an unknown female with an injury to the head, and an unknown man found floating some distance away with two pillows fastened beneath his arms.³⁷⁷ With everyone safely on *Elmina*, the sail craft turned southwest and started toward shore just after 7:00 am.³⁷⁸ Nugent and his men provided every possible comfort for the ailing passengers, including clothes and refreshment, and gave the women use of his cabin for privacy and rest.³⁷⁹

Around the same time *Elmina* arrived on the disaster site, *Anthony Wayne*'s surviving lifeboat was reached Vermilion. The six passengers paddled throughout the night, traversing the watery expanse with nothing but moonlight to guide them. When the boat reached land Gore found no steamboats docked at Vermilion, but told his companions to find any help possible.³⁸⁰ The captain then acquired a horse-drawn buggy and made haste back to Sandusky. Before leaving, he instructed Vorce, the clerk, to make his way to Cleveland and have a steamboat dispatched to the wreck in case none could be found in Sandusky.³⁸¹ Vorce succeeded in finding two small sailing vessels in Vermilion before making his way east, both of which instantly set sail. A disheveled Gore soon after arrived in Sandusky and sought out the mayor to inform him of the

³⁷⁶ *Daily Sanduskian* 29 April 1850, 2.

³⁷⁷ *Daily Sanduskian* 30 April 1850, 2.

³⁷⁸ *Daily Sanduskian* 29 April 1850, 2;

³⁷⁹ *Daily Sanduskian* 2 May 1850, 2; *Toledo Blade* 2 May 1850, 3.

³⁸⁰ *Toledo Blade* 1 May 1850, 2.

³⁸¹ *Buffalo Commercial Advertiser* 1 May 1850, 2.

explosion.³⁸² Word was sent to Captain Howe of the steamboat *Alabama*, which was aground on the sandbar just off that city, and upon hearing the news the captain immediately ordered the engines started and worked very hard to get the vessel off.³⁸³ Smaller sailing vessels were sent to Kelley's Island to inform the steamer *Islander* about what had happened and seek aid.³⁸⁴

As *Elmina* sailed toward Sandusky it was intercepted by *Islander*. The small side-wheeler, under the command of Captain Orr, was built at Kelley's Island in 1846 for the purpose of transporting people and goods between that place and Sandusky.³⁸⁵ *Islander* was making a usual run to the mainland when one of the boats from Sandusky informed Orr of *Anthony Wayne's* misfortune. The steamer quickly started for the site, but soon encountered *Elmina* coming in the bay.³⁸⁶ The wind increased in the late morning hours, resulting in choppy seas that made it difficult for the schooner to approach shore. With conditions too precarious for transferring passengers on the open water, Orr's steamer took *Elmina* in tow to Kelley's Island.³⁸⁷ Some of the small sailing crafts heading out of Sandusky put in there, too. Those onboard these craft included a doctor and several "efficient gentlemen" who quickly lent aid to the suffering.³⁸⁸ Once the passengers transferred to the *Islander*, the little side-wheeler made a direct line for Sandusky, arriving around 1:00 pm.³⁸⁹ On the way in, *Islander* passed the steamer

³⁸² *Daily Sanduskian* 29 April 1850, 2; *Buffalo Commercial Advertiser* 1 May 1850, 2.

³⁸³ *Daily Sanduskian* 29 April 1850, 2.

³⁸⁴ *Daily Sanduskian* 29 April 1850, 2.

³⁸⁵ *Buffalo Daily Courier & Pilot* 16 September 1846 (MHGLC 2010).

³⁸⁶ *Cleveland Herald* 29 April 1850 (GLHSC); *Buffalo Commercial Advertiser* 1 May 1850, 2.

³⁸⁷ *Toledo Blade* 2 May 1850, 3.

³⁸⁸ *Daily Sanduskian* 2 May 1850, 2.

³⁸⁹ *Daily Sanduskian* 29 April 1850, 2.

Alabama and informed Howe that they carried all the survivors from the wrecked vessel, at which point Howe turned around and returned to Sandusky.³⁹⁰ Unfortunately neither the haste of the boats or the presence of a doctor were enough to save the lives of the more critically injured persons being transported, as both Elmore and Franklin Freeman, a deckhand, expired before reaching land.³⁹¹

The Aftermath of Tragedy

Upon reaching Sandusky, the residents launched into action and began caring for the displaced survivors. All those with serious wounds and burns were taken to the North American Hotel where make-shift medical facilities were erected.³⁹² These efforts were overseen by a local physician, Doctor Stanley, who went to work treating the wounded with “plenty of oil and other remedies for those who still survived from the burning and scalding steam.”³⁹³ Those without life threatening injuries were taken into other hotels and private homes; the citizens of that town took every possible measure to ensure both comfort and rest.

A portion of the surviving passengers did not require significant medical attention, and collected themselves as best they could to continue on with their journey. On Monday, 29 April 1850, the steamer *Alabama* was gracious enough to provide them with passage to Cleveland, where the citizens of that town waited anxiously to hear

³⁹⁰ *Daily Sanduskian* 2 May 1850, 2.

³⁹¹ *Daily Sanduskian* 30 April 1850, 2.

³⁹² *Daily Sanduskian* 2 May 1850, 2; *Buffalo Commercial Advertiser* 1 May 1850, 2.

³⁹³ *Daily Sanduskian* 2 May 1850, 2.

further word of the *Anthony Wayne* disaster.³⁹⁴ On board *Alabama* were passengers D.A. Eddy, C. Mollen, and H. Pettinger, who collectively wrote a letter praising the residents of Sandusky for their compassion and sympathy, and also to the Captains Nugent, Orr, and Howe for their combined assistance.³⁹⁵

Not too long after, word of the disaster reached Detroit and the ears of Charles Howard, primary owner of *Anthony Wayne*. An hour before hearing the dreadful news of the sinking, Howard received a letter from Gore in which he spoke satisfactorily of the steamer's performance and applauded the recent improvements.³⁹⁶ Shocked and concerned for those onboard, Howard immediately took passage aboard the side-wheeler *Arrow*, Captain S.F. Atwood, and arrived in Sandusky on Tuesday, 1 May 1850.³⁹⁷ Once in town, Howard made "the most active exertions for the relief of the wounded and suffering," in addition to venturing out onto Lake Erie to search for the bodies of those killed.³⁹⁸ In addition to seeing that everyone was in comfortable accommodations, Howard also personally covered all expenses relating to medical treatment and convalescence.³⁹⁹ His efforts following the disaster were both publically noted and praised.

On Monday, 29 April 1850, a panel of six jurors was assembled for conducting an inquest for the Coroner of Erie County on the bodies recovered from *Anthony*

³⁹⁴ *Daily Sanduskian* 2 May 1850, 2.

³⁹⁵ *Cleveland Herald* 29 April 1850 (GLHSC); *Daily Sanduskian* 2 May 1850, 2.

³⁹⁶ *Toledo Blade* 1 May 1850, 2.

³⁹⁷ *Toledo Blade* 1 May 1850, 2.

³⁹⁸ *Daily Sanduskian* 1 May 1850, 2; 2 May 1850, 2.

³⁹⁹ *Daily Sanduskian* 2 May 1850, 2.

Wayne.⁴⁰⁰ Thirteen persons, both passengers and crew members, were called upon to give testimony pertaining to the events of early Sunday morning. Included amongst the crew were Edgcomb and Starkweather, a wheelman, John Johnson, the cabin maid, Jane McCoy, a deckhand, Anthony Blow, and a fireman, John Williams. The mates gave the most detailed account of the sinking from their perspective, and Edgcomb added that the steamer was in good condition, having been rebuilt in the 1848-49 seasons.⁴⁰¹ No reason could be given for the cause of the explosion, as everything was running satisfactorily right up to the time of the disaster. The rest of the crew agreed with the statements of the mates, and assured the panel that the rescue efforts pursued by the employees of the boat displayed good judgment and were conducted out of necessity.

The seven passengers interviewed provided their own opinions of the events. These individuals included Charles J. Smith, Edward Cavanaugh, Archer Brackney, John Fairchild, Edwin Kellogg, G.W. Gunn, and Caroline Kimball. Their collective testimony differs from that of the crew's regarding the captain's actions. Smith, Brackney, and Fairchild described how several passengers called to Gore for aid after the steamboat sank, but he blatantly offered none. Fairchild even went so far to say the captain "neglected and deserted persons who were calling for help."⁴⁰² Other passengers, including Gunn, and the crew, did not agree with this sentiment. Given the dismal condition of the lifeboat, they said, Gore did all within his power before leaving the wreck site.

⁴⁰⁰ *Daily Sanduskian* (30 April 1850, 2) published the full report of the inquest, which can be found in its entirety in Appx. C.

⁴⁰¹ *Daily Sanduskian* 30 April 1850, 2.

⁴⁰² *Daily Sanduskian* 30 April 1850, 2.

Following the inquest, the jury concluded that *Anthony Wayne* sank as the result of a boiler explosion and the dead initially brought to Sandusky died because of injuries sustained in that event. The deceased persons included first engineer Elmore, deckhand Freeman, two of the vessel's cooks, and passengers Myron Titus, O.W. Hart, and the widow traveling from Cincinnati. The panel also absolved Gore and his crew of any blame for the disaster and their conduct immediately thereafter, stating that everyone acted professionally and judiciously throughout the entire ordeal. Their report to the coroner stated, "every exertion which men could make was exercised by the officers... worthy of all praise, that their efforts were timely, and well made, both in saving and picking up passengers."⁴⁰³ The report was signed by jurors Samuel B. Caldwell, William H. Caswell, Samuel W. Butler, Solomon C. Moore, Theron Goodwin, and Harlow Case.

In addition to the coroner's inquest, another investigation was conducted shortly after in an effort to find cause for the sinking of *Anthony Wayne*. Testimony was taken before Z.W. Barker, Justice of the Peace for Portland Township, Ohio, on 1 May 1850.⁴⁰⁴ Only six persons were interviewed during this examination, all intimately familiar with the steamboat: Gore, Edgcomb, Starkweather, Vorce, Freeman, and Captain S.F. Atwood, captain of the steamer *Arrow*. Each of the crew gave their age, position, and what they knew of both the boat and accident. Much of what was stated in the Coroner's Inquest was recounted here, with little new information being presented. Saloon keeper Freeman stated that he spoke with Elmore before he died and was

⁴⁰³ *Daily Sanduskian* 30 April 1850, 2.

⁴⁰⁴ *Daily Sanduskian* 2 May 1850, 2.

informed, with fireman John Williams present, that the boilers were operating at 75 to 80 lbs. of steam.⁴⁰⁵ The boilers were built to withstand up to 120 lbs. of pressure, meaning they were operating at 67% capacity when the explosion occurred.⁴⁰⁶ The clerk, Vorce indicated the boilers underwent inspection in the spring of 1849 by D.C. Whitman, United States inspector of boilers for Detroit, but that the certificate was onboard the vessel at the time of sinking.⁴⁰⁷ The hull of the steamer was also thoroughly inspected at the same time by George Irving, inspector of hulls for Detroit, and found to be satisfactory.⁴⁰⁸ Captain Atwood's testimony further provided evidence for the strength and seaworthiness the hull, and for the boilers being brand new, as he personally saw *Anthony Wayne* being completely rebuilt at Detroit in 1848-49. There was no known action taken on the part of the Justice of the Peace after hearing these accounts.

While inquests and investigations took place amongst the living, the remains of the deceased still needed to be put to rest. Unfortunately, because the *Anthony Wayne's* books and trip sheet went down with the ship, there was no way to accurately determine just how many passengers were onboard at the time of the sinking. The *Buffalo Commercial Advertiser* printed the following breakdown:

... from the most careful estimate that can be made, we put the number of passengers on board at 63. Of this number, 25 are known to be saved unharmed, 11 wounded, 19 pretty definitely ascertained killed- leaving 17 (if on board) missing unaccounted for. The crew consisted of 30. Of these, 11 were killed, 4

⁴⁰⁵ *Daily Sanduskian* 2 May 1850, 2.

⁴⁰⁶ *Daily Sanduskian* 29 April 1850, 2.

⁴⁰⁷ *Daily Sanduskian* 2 May 1850, 2.

⁴⁰⁸ *Daily Sanduskian* 2 May 1850, 2.

wounded, and 15 saved uninjured. Making an aggregate of 93 persons on board, 40 of whom are saved unharmed, and 15 wounded- leaving 38 persons killed and missing.⁴⁰⁹

Thirty-eight is generally accepted as the official total for the casualties claimed by the *Anthony Wayne* disaster, although this can never be conclusively determined. The bodies of Myron Titus, the unknown widow, and two of the cooks were buried at “the new cemetery” in Sandusky on 2 May 1850, with funeral services conducted by Reverend E.R. Jewett.⁴¹⁰ Other deceased persons were transported back to their families or hometowns throughout the region.

Given the high number of fatalities, the public experienced great shock and sadness, but those feelings quickly dissolved into anger. Maddened by the belief that steamboat boilers only malfunction under a blind eye, citizens in the region demanded answers and, above all else, justice. With both engineers deceased, the weight of public scrutiny fell upon the shoulders of Gore. Although the Coroner’s Inquest and Justice of the Peace Examination exonerated the crew of any wrongdoing, the community fixed on the steamer’s captain as the primary culprit in this tragedy. The *Toledo Blade* published claims of negligence, which included: Gore was trying to race *Superior* into Cleveland; the captain knew one of the steamer’s boilers was faulty, but did nothing to remedy it; and he refused to help children struggling in the water after the explosion.⁴¹¹ The same article also found fault with the panel of jurors for not asking enough questions, and with

⁴⁰⁹ *Buffalo Commercial Advertiser* 1 May 1850, 2.

⁴¹⁰ *Buffalo Commercial Advertiser* 2 May 1850, 2.

⁴¹¹ *Toledo Blade* 3 May 1850, .2.

the boiler inspector who allegedly knew there were issues with the boilers, although what these specific issues were remains unknown.⁴¹² No blame ever touched Charles Howard, the boat's owner, however, who was instead praised for his exertions in seeing to the comfort of the survivors. One newspaper commented that Howard would likely "cut off his right hand as to have sent off a boat unfit or unsafe for the conveyance of passengers."⁴¹³ Fortunately for Gore, notoriety for the accident was short lived. The account of passenger Eddy regarding the captain's actions during and after the sinking, as well as the statement from Elmore before he died that all was running smoothly in the engine room, were enough to clear Gore of any wrongdoing.

Besides the incredible loss of life, the sinking of *Anthony Wayne* also resulted in an immense loss of property for the owners, crew, and passengers. The exact value of the vessel is not known, but newspaper reports list the total being between \$15,000 and \$20,000.⁴¹⁴ The owners insured the steamer, in part, through three separate companies, the breakdown being: \$5,000 in the North Western Insurance Company; \$3,000 in the Columbus Insurance Company; and \$3,000 in the Lexington Insurance Company.⁴¹⁵ The ship itself was deemed a total loss and the owners made no attempt to salvage it. Also lost was the boat's safe, which contained \$600 that Vorce collected from freight fares.⁴¹⁶

⁴¹² *Toledo Blade* 3 May 1850, 2.

⁴¹³ *Toledo Blade* 4 May 1850, 2.

⁴¹⁴ *Buffalo Commercial Advertiser* 1 May 1850, 2; *Toledo Blade* 1 May 1850, 2.

⁴¹⁵ *Toledo Blade* 1 May 1850, 2. *Buffalo Commercial Advertiser* (1 May 1850, 2) agrees with the first two figures, but states the third, Lexington Insurance Company, only covered \$2,000.

⁴¹⁶ *Buffalo Commercial Advertiser* 1 May 1850, 2; *Toledo Blade* 1 May 1850, 2.

After a thorough inventory of items known to have been onboard, the total loss for both boat and cargo was estimated at \$28,000.⁴¹⁷

The owners were not the only ones to have losses from *Anthony Wayne*, as most of the passengers lost the possessions they were traveling with. Passenger Edwin Kellogg and his family probably suffered the worst, as they were relocating from Toledo to Cleveland and had on board all of their household belongings.⁴¹⁸ Scattered luggage and cargo was picked up by *Commodore Lawrence* and *New Jersey*, the two schooners set out from Vermilion by the clerk, which included some 7 trunks, 2 beds and beddings, 8 barrels of eggs, 2 barrels of pork, 6 boxes of soap, 1 sack of sassafras, and 1 sack of sweet cicely root.⁴¹⁹ Captain G.W. Forgason of the scow schooner *Almira* also encountered some of the debris left behind by *Anthony Wayne*, consisting of 9 trunks, 1 valise, 7 boxes of soap, 1 keg of lard, 5 rush chairs, 3 Windsor chairs, 1 table, and 1 colored box full of clothing.⁴²⁰ The *Sandusky Mirror* newspaper stated that Captain Forgason intended to claim salvage rights from the recovered articles, but the *Cleveland Herald* denounced the allegation, stating that the captain brought the items to Cleveland with no intention of charging for salvage.⁴²¹ Luggage and other debris floated around the lake in the days following the disaster. A mass of such objects from the wreck washed ashore at Euclid, Ohio, 9 miles (14.48 km) east of Cleveland, which included several mattresses, 1 chest, and a coffin, traveling a total of 43.75 miles (70.40 km) across the

⁴¹⁷ *Daily Sanduskian* 10 January 1851, 2.

⁴¹⁸ *Daily Sanduskian* 2 May 1850, 2.

⁴¹⁹ *Daily Sanduskian* 29 April 1850, 2; *Buffalo Commercial Advertiser* 1 May 1850, 2; *Toledo Blade* 2 May 1850, 2.

⁴²⁰ *Daily Sanduskian* 2 May 1850, 2.

⁴²¹ *Daily Sanduskian* 2 May 1850, 2.

open lake.⁴²² Mattresses and trunks were not the only items that came aground, as the body of a small child was found at Fairport Harbor, Ohio, 12 days after the sinking.⁴²³ The body was believed to be the child of passenger John Ellis and received a proper burial from local citizens.

Other Disasters of 1850

The devastation of *Anthony Wayne*'s sinking had an impact on the entire Great Lakes region, but most notably the communities along the southern shore of Lake Erie. Boiler explosions were rare on the lakes and steamboat travel was thought to be safe and comfortable. Unfortunately for the citizens, however, *Anthony Wayne* was but one of four major steamboat tragedies that year which resulted from boiler explosions or fires, those vessels being *America*, *Troy*, and *G.P. Griffith*. A brief summary of each loss is presented below, followed by a small discussion of total losses.

The first disaster happened to the steamer *Troy*. On Saturday, 23 March 1850, the side-wheeler *Troy*, completed its first run of the season from Toledo to Buffalo and was trying to make its way to Black Rock amidst heavy ice after a brief stop in Buffalo. The *Buffalo Commercial Advertiser* summarized the events that followed:

As the steamer *Troy*, Capt. Wilkins, was passing down Niagara River to Black Rock, and when opposite the foot of Bird Island, one of her boilers burst with terrible force and fatal results. The main and hurricane decks in the fore part of

⁴²² *Cleveland Plain Dealer* 4 May 1850.

⁴²³ *Daily Sanduskyian* 27 May 1850, 2.

the boat, and the fixtures around the machinery were shivered literally to atoms. The boiler burst on the underside, and was raised by the force of the steam partially through the main deck, and towards one side of the boat- the pipes and chimneys were thrown down, and the whole scene presents a spectacle of ruin, such as we never looked upon before.⁴²⁴

In all, 11 people lost their lives as a result of the *Troy* disaster.⁴²⁵ The Coroner's Inquest that was conducted in the following days yielded no definitive reason for why the machinery failed beyond "insufficiency of the boiler."⁴²⁶ One of the firemen, Eli Freeman, reported seeing the underside of the boiler bulge out prior to the accident, but the engineer told him it was nothing and merely asked the watch to reduce the size of the fire.⁴²⁷ Of the boilers, the following is further said:

The boiler was nearly full of water when it exploded, and the head of steam was not high. The fracture happened in the bottom plate, which is rather thin. It is a boiler said to have been taken from the steamer *Fulton*, several years since, rather old but said to be perfectly safe.⁴²⁸

⁴²⁴ *Buffalo Commercial Advertiser* 25 March 1850, 2.

⁴²⁵ *Buffalo Commercial Advertiser* 25 March 1850, 2; *Toledo Blade* 12 April 1850, 3. Mansfield (1899, 660) reported 22 individuals perishing as the result of the explosion.

⁴²⁶ *Buffalo Commercial Advertiser* 25 March 1850, 2.

⁴²⁷ *Buffalo Commercial Advertiser* 28 March 1850, 2.

⁴²⁸ *Daily Sanduskian* 28 March 1850, 2.

Troy's hull was not fatally wounded as a result of the disaster and therefore did not sink. The steamer underwent substantial repairs and improvements, which reportedly cost \$4,000, and resumed service on the lakes in early June 1850.⁴²⁹

While both *Troy* and *Anthony Wayne* suffered disaster in the spring, another devastating explosion took place upon Lake Erie in the summer of 1850. The side-wheeler *America*, while steaming between Dunkirk and Barcelona, New York on 31 July, also burst one of its boilers with the results no less horrific (Fig. 15).⁴³⁰ “The explosion took place in the starboard boiler, the second from the outside, blowing the forward end of it entirely off, turning the boiler deck upside down, raising the upper deck some four feet, and making the center of the boat a perfect wreck.”⁴³¹ As in the case with *Troy*, the hull itself did not sustain serious damage and even though the vessel was on fire as it was towed to shore, by the ubiquitous steamer *Alabama*, *America* did not sink.⁴³² Unfortunately, a thorough examination into the cause of the explosion has not been found, but a small editorial in the *Buffalo Commercial Advertiser* states: “In this matter there has been gross carelessness. Such accidents cannot occur without it, and justice and the safety of the travelling public demand that the cause of this explosion be

⁴²⁹ *Toledo Blade* 1 May 1850, 2; *Buffalo Commercial Advertiser* 31 May 1850, 2.

⁴³⁰ *Buffalo Commercial Advertiser* 31 July 1850, 3; *Toledo Blade* 31 July 1850, 3; Lloyd 1856, 241; Mansfield 1899, 661.

⁴³¹ *Daily Sanduskian* 1 August 1850, 3; *Buffalo Commercial Advertiser* 2 August 1850, 2; *Toledo Blade* 2 August 1850, 2.

⁴³² *Daily Sanduskian* 1 August 1850, 3; *Buffalo Commercial Advertiser* 2 August 1850, 2; *Toledo Blade* 2 August 1850, 2.

ascertained and those in fault be held responsible.”⁴³³ Eleven individuals lost their lives as the result of *America*’s failed boiler, while property damage amounted to \$6,000.⁴³⁴

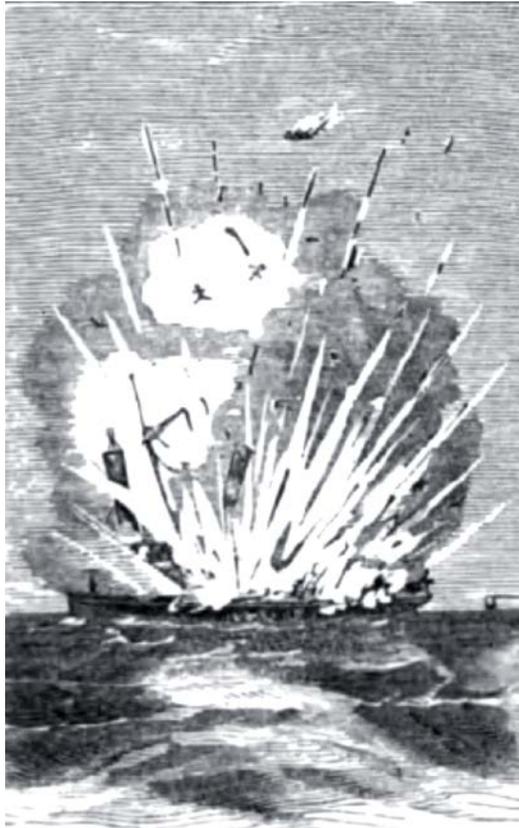


Figure 15: Explosion of Great Lakes steamboat *America*. (Lloyd 1856, 241)

The fourth catastrophe to make headlines in 1850 was categorized as one of the worst maritime disasters of all time on the Great Lakes, the burning of the steamboat *G.P. Griffith*. Unlike the three cases already discussed, the culprit here was not an exploding boiler, but rather a devastating fire that ravaged the vessel. In the early

⁴³³ *Buffalo Commercial Advertiser* 2 August 1850, 2.

⁴³⁴ *Daily Sanduskian* 10 January 1851, 2.

morning hours of 17 June 1850, the side-wheeler was making its way up Lake Erie from Buffalo after a brief stop in Fairport Harbor. Between 2:00 and 3:00 am, while 15 miles (24.14 km) east of Cleveland, the crew discovered a fire underneath the main deck near the smoke pipes amidships (Fig. 16).⁴³⁵ The second mate, Samuel McCoit, gave his account of the events, which was featured in the *Toledo Blade*:

The Captain and first Mate had turned in, [McCoit] went up into the pilot house and talked with the wheelsman a few minutes, went down and was standing by the capstan on deck when the wheelsman called out to him that there was fire between the smoke pipes on deck. He ran up and saw a stream of spark issuing from below up between the smoke pipes and their water jackets. He immediately called the deck hands from below with buckets, and commenced throwing water down the pipes. The flames and heat increased rapidly, and he ordered the wheelsman to put her ashore- she was then about 2.5 miles (4.02 km) out. The Captain was then called and by this time the alarm had spread through the boat. The cabin aft was cut off from communications forward by a wall of fire through the center of the boat, and running head to land threw the flames and smoke back so that the passengers commenced jumping overboard as soon as the flames broke out. In about five minutes the boat struck [ran aground] and all hopes of getting ashore being cut off, a general rush was then made for the water. The

⁴³⁵ *Toledo Blade* 19 June 1850, 2; 20 June 1850, 2; Citizens of Cleveland 1850, 3-4; Lloyd 1856, 253; Mansfield 1899, 659-60.

poor emigrants then tumbled overboard like so many scared sheep. At that moment everything seemed to be lit up with flames.⁴³⁶

In just over 20 minutes, *G.P. Griffith* burned to the waterline and of the over 300 persons onboard it is estimated between 210 and 275 died, with most of the death caused by drowning.⁴³⁷ The steamer was deemed a total loss by its owners, with property loss totaling upwards of \$60,000.⁴³⁸ The cause of the fire was not definitely determined, but it was initially thought to have originated between the smoke pipes, the surrounding water jackets having been filled in with clay.⁴³⁹ Another hypothesis suggested that flammable or combustible material being transported in *G.P. Griffith's* hold was to blame, as the steamer was carrying fireworks for a Fourth of July celebration.⁴⁴⁰ In any event, the burning of *G.P. Griffith* once again proved that steamboats were not immune to the devastating effects of fire.

⁴³⁶ *Buffalo Commercial Advertiser* 20 June 1850, 2; *Toledo Blade* 20 June 1850, 2.

⁴³⁷ *Buffalo Commercial Advertiser* 18 June 1850, 2; *Toledo Blade* 18 June 1850, 2; *Buffalo Commercial Advertiser* 20 June 1850, 2; *Toledo Blade* 20 June 1850, 2; Lloyd 1856, 254.

⁴³⁸ *Daily Sanduskian* 10 January 1851, 2.

⁴³⁹ *Buffalo Commercial Advertiser* 26 June 1850, 2.

⁴⁴⁰ *Buffalo Commercial Advertiser* 26 June 1850, 2.



Figure 16: The burning of steamboat *G.P. Griffith* (Lloyd 1856, 254)

Troy, America, G.P. Griffith, and Anthony Wayne constituted some of the worst disasters of 1850, but there were other incidents that year which added to the losses. Whether by fire, explosions, collisions, or other circumstances, the number of human casualties from Great Lakes side-wheelers during that year equaled around 348, while property damage exceeding \$265,700.⁴⁴¹ Residents throughout the region were not accustomed or willing to accept to such a shocking loss of life, and believed the majority of these accidents resulted from poor construction and management of the vessels.⁴⁴² In the shadow of such tragedies, the public focused blame on shipbuilders and machinery manufacturers, the captain and crew, the owners, and the steamboat inspectors, as it was

⁴⁴¹ *Daily Sandusian* 10 January 1851, 2. This report listed the death toll for *Anthony Wayne* as 65 and therefore this total was adjusted to the more commonly cited number of 38. This figure does not include propeller steamboats losses.

⁴⁴² *Buffalo Commercial Advertiser* 22 June 1850, 2; 2 August 1850, 2.

thought these accidents could be completely avoided. Others were more understanding in these matters, as expressed in an article from the *Buffalo Commercial Advertiser*:

... in the cases which have occurred this season [1850], in which three steamers have been blown up or burnt, their masters have not only been part owners of the vessels, but we believe competent and careful officers; so that their own lives and property were in danger every moment they consented to run a boat that was in any way dangerous or unseaworthy. Now, is there any body so uncharitable as to say they believe that the least danger was apprehended by any of the owners, officers or crew of these boats? Would they have consented for a moment to expose their lives and property at such a risk, had they been aware of danger? For one, we believe not- common sense forbids- human nature rejects such a conclusion.⁴⁴³

While it stands to reason that the owners and masters of steamboats would not be so willing to jeopardize their property and livelihood, as well as risk the lives of employees and patrons of the boats they commanded, the fact remained that the frequency of such incidents were increasing at an alarming rate.

Each new disaster only intensified the public's resolve to identify the causes and bring an end to the hazards of steamboat travel on the lakes. A report originally published in the *Cleveland Plain Dealer* discussed the recent rash of Lake Erie boiler explosions during 1850: "For the last twenty-five years, only five explosions had taken

⁴⁴³ *Buffalo Commercial Advertiser* 27 June 1850, 2.

place, and those so slight that but thirty persons in all were killed. During the last five months between 80 and 100 persons have been killed from this cause.”⁴⁴⁴ With such an impressive safety record quickly unraveling, the lake community began to speculate as to why these disasters were happening in the first place. The *Buffalo Commercial Advertiser* attempted to answer this question by turning to a steam machinery expert for insight and published the following: “We were told last evening, that one of our extensive Boiler manufacturers and repairers, prophesied in the spring that this season would be prolific of accidents- for a large number of the boats had omitted the usual repairs on account of the bad business of last year.”⁴⁴⁵ This statement from an anonymous boiler manufacturer seemingly points fingers at an ailing economy and the poor choices made by the managing officers for the pains experiences by these ill-fated steamers. While negligence can be cited in the case of *Anthony Wayne*, as its officers failed to take action against a boiler leak days before the explosion, no reports have been found to suggest that *Troy* or *America* blew up under similar circumstances.⁴⁴⁶

Another theory proposed that the outbreak of accidents was due to the high pressure steam engines employed on these particular steamboats. High pressure systems were believed to be far more prone to accidents than low pressure engines. An article

⁴⁴⁴ *Toledo Blade* 2 August 1850, 3. Citizens of Cleveland (1850, 11) published the names of the 5 boiler explosions prior to 1850: *William Peacock*, November 1850, 15 lost; *O.H. Perry*, 1835, 6 lost; *Erie*, August 1840, 6 lost; *General Vance*, June 1844, 6 lost; *Louisiana*, May 1849, 4 lost.

⁴⁴⁵ *Buffalo Commercial Advertiser* 2 August 1850, 2.

⁴⁴⁶ In Gore’s testimony of events (*Toledo Blade* 1 May 1850, 2), he had this to say regarding the maintenance of the boilers: “They [the boilers] were thoroughly overhauled and examined in the spring before she started.” Regarding *Troy*, Captain Wilkins stated (*Buffalo Commercial Advertiser* 28 March 1850, 2) that he thought it would be well to overhaul the boilers sometime in the spring of 1850, but had not done so before the explosion.

originally featured in the *Detroit Free Press* discussed the issue at length:

On a thorough investigation it is ascertained that nearly all the losses of life and property that have occurred on the lakes from fire and explosions have been on high pressure boats, while the low pressure boats which constitutes one half the present number of steamboats, have been comparatively free from losses from the above causes... The second inquiry is, why do people build these high pressure volcanoes for the public to ride on? Simply because high pressure engines of the same power cost but about one-half the price of low pressure. This is a solemn but melancholy truth, however unwelcome such a statement may be to the proprietors of these boats...⁴⁴⁷

There is no denying that high pressure boats experienced a greater number of explosions on the Great Lakes, but was the driving force for using these ‘high pressure volcanoes’ purely economic and financial considerations?⁴⁴⁸ Halsey, in his economic analysis of 19th century steam engines, states that the high pressure variety was cheaper than their low pressure counterparts in terms of both initial capital costs and direct operating costs (e.g. labor, materials, repairs, and fuel) in all parts of the American West.⁴⁴⁹ Statistics published in 1850 show there were 28 side-wheelers equipped with low pressure engine and 27 running on high pressure, with the near even split a result from factors such as

⁴⁴⁷ *Buffalo Commercial Advertiser* 2 August 1850, 2.

⁴⁴⁸ The low pressure steamer *Erie* burst its boiler on 9 March 1844 at Detroit and burned (Appx. A). This is the only reported incident of a low pressure vessel having such an accident on the lakes prior to 1850.

⁴⁴⁹ Halsey 1981, 723; 740.

economy of use to owner's opinion of such engines.⁴⁵⁰ Despite the cheaper costs associated with high pressure drive systems, half of the Great Lakes steamboat owners decided to install low pressure engine in their boats, although their explicit motives for doing so are not known today.⁴⁵¹

With half of Lakes steamboats utilizing high pressure steam engines, the community began to take action to keep their residents and transportation industry safe. Several believed that the only way this would happen was if the federal government involved themselves in this matter, as described in the following article published in *Buffalo Commercial Advertiser*:

Government should also take the matter in hand, and allow no boat to be enrolled or licensed which has not been thoroughly inspected and received a certificate that her boilers are so far as human eyes can discover perfectly safe, whose boilers and fire-holds are not fire proof, which is not provided with life boats and life preservers sufficient to preserve as many lives as she can carry, and so rigged and arranged that they may be brought into requisition at any moment; and which is not officered and manned by thorough seamen and mechanics as sailors and engineers. These precautions taken, we do not see what more can be done to insure the safety of the lives of passengers who travel on the lakes. Heretofore all these things have not been required, probably because they were not deemed necessary, but the occurrences of this season admonish us that all possible

⁴⁵⁰ *Buffalo Commercial Advertiser* 26 June 1850, 2. Propellers steamboats are also listed in these statistics, totaling 27 high pressure engines.

⁴⁵¹ Hunter (1993, 290-1) offers examples of low pressure steamboats that experienced boiler explosions, but states that high pressure explosions most often yielded greater destruction and loss of life.

vigilance and precaution should be taken to guard against the recurrence of such heart-rending disasters.⁴⁵²

Citizens soon took action to remedy such existing defects. After the burning of *G.P. Griffith*, a group of Cleveland residents banded together and appealed Congress to enact stronger resolutions and laws concerning the construction, inspection, and operation of steamboats. They submitted a report that not only discussed the *G.P. Griffith* disaster specifically, but also offered Great Lakes steamboat loss statistics and a summary of the Steamboat Act of 1838. Recommendations made by the committee included the following: fuel should not be stored in the fire room; all wooden components, such as bulkheads, should be moved safely away from the furnace; the fire room should be lined with metal sheathing and have water on the underside; the furnace, boilers, and chimneys should all be outfitted with water jackets.⁴⁵³ This report, which included an outline for remedial steps, was submitted to Congress shortly after its publication. Two years passed before the federal government took action and passed the Steamboat Act of 1852, a law that increased the duties and abilities of steamboat inspectors and offered dire consequences for those who failed to comply with the government's safety standards.

⁴⁵² *Buffalo Commercial Advertiser* 27 June 1850, 2.

⁴⁵³ *Citizens of Cleveland* 1850, 14.

Boilers Explosions

Anthony Wayne was but one of many catastrophic boiler explosions that took place in the 19th century. While the public invariably assumed they were the result of negligence, the exact causes of these explosions were not very widely understood. Since the 1830s, scientists and engineers struggled to identify the circumstances and conditions that caused boilers to violently fail. Studies conducted throughout the century discuss this phenomenon at length and offer probable reasons for why explosions occurred.⁴⁵⁴ Although some of these causes were widely debated and rejected, certain factors were undeniably agreed upon as legitimate and causative. From these, three basic categories can be derived: structural weakness; physical stresses on the structure itself; and inexperience of the system operator. Once the causes have been addressed, the subject of *Anthony Wayne* will be considered in an attempt to find probable cause for its explosion.

Structural weakness was one of the primary reasons for a boiler exploding. Deficiency of this kind typically resulted from either the use of low quality materials and/or poor craftsmanship during the construction phase.⁴⁵⁵ If boilers were not constructed carefully and with the proper materials, in terms of both composition and type, overall maximum strength would be compromised and a boiler could be in jeopardy of exploding. Considerations such as thickness of iron, placement and alignment of rivets, and support of the boiler were only some of the factors that

⁴⁵⁴ Hunter (1997, 292 n. 55) states that the most thoroughly conducted experiments on the topic of boiler explosions was published in the "Report of the Experiment Made by the Committee of the Franklin Institute... on the Explosions of Steam-Boilers..." *Journal of the Franklin Institute* 21-24 (1836-7).

⁴⁵⁵ *Buffalo Commercial Advertiser* 6 August 1850, 2; Fairbairn 1851, 180-1; Clare 1860, 321-2; Thurston 1888, 37-8; Hunter 1997, 295.

manufacturers had to be mindful of. Structural weakness also resulted from regular use, wear, and degradation of the boiler over time.⁴⁵⁶ The constant contact between the water and the iron plating resulted in the formation of corrosion byproduct on the interior of the boiler, thus weakening the plates.⁴⁵⁷ Not only would the plates corrode away, but the feed-water pumps would also take in mud and other sedimentary deposits that would collect within the boiler. These deposits, if not regularly removed, could cook against the hot plates and thus weaken the iron considerably, increasing the possibility of an explosion. While it was customary for steam engines to be transferred from vessel to vessel after a hull expired, the same rule of thumb did not hold true for boilers and the transfer of these components was frowned upon. Some were reused, however, and explosions did result from the use of outdated or degraded boilers.

Physical stresses, both internal and external, constituted the second major cause of boiler explosions in steamboats. Of these, the most common and often cited internal strain exerted on a boiler was the buildup of excessive steam pressure.⁴⁵⁸ If too much pressure was generated and could not be relieved, either by the safety valve or through the engine's cylinder, the resulting force could potentially deform and rupture the boiler's iron plating. Excessive pressure offered a reasonable explanation for why explosions occurred and was the impetus for most of the safety reforms that took place in 1852.⁴⁵⁹

⁴⁵⁶ Borne 1855, 150; Clare 1860, 322; Thurston 1888, 38; Hunter 295.

⁴⁵⁷ Lardner (1856, 245) along with Sennett and Oram (1902, 127-9) discuss the problems associated with boiler corrosion specifically in regard to salt water, which can bring about a more rapid and severe degradation than fresh water.

⁴⁵⁸ Fairbairn 1851, 175-8; Borne 1855, 150; Clare 1860, 322; Fischer 1874, 311-2; Hunter 1997, 294-5.

⁴⁵⁹ Hunter 1997, 294.

Another widely accepted reason for violent ruptures was a deficiency of water within the boiler; when water levels decreased to a certain point, the iron plates were exposed to the high temperatures of the fires and became super-heated.⁴⁶⁰ The danger here was two-fold. Firstly, as temperatures increased, the tensile strength of the plates weakened by one-third, meaning high or even moderate pressure could burst the boiler.⁴⁶¹ Secondly, when water was introduced back into a red-hot boiler, the rapid formation of steam could be too much for the safety valves to handle and the pressure would split the boiler at its weakest areas.⁴⁶² Another contemporary theory was that combustible gases were created within the boiler that can ignite.⁴⁶³ In his discussion on the problem, Hunter states that experiments conducted by the Franklin Institute proved that the amount of combustible hydrogen generated inside the boiler was not sufficient to produce an explosion.⁴⁶⁴ Finally, in regard to physical stresses exerted upon the boiler, it is to be remembered that these structures were housed within a constantly moving vessel.⁴⁶⁵ Vibrations or shocks to the machinery, caused from a vessel's rolling side to side or grounding upon a sandbar, could seriously weaken plates, joints, and fasteners. These damages may be slight initially, but over time and with continued stress, they can worsen to the point where the weakness caused an explosion to take place.

The third widely-accepted explanation for why boilers exploded revolves around engineers mismanaging or being ignorant of their craft. Aside from the reasons already

⁴⁶⁰ Fairbairn 1851, 178-9; Wallace 1865, 47; Fischer 1874, 319-20; Hunter 1997, 293-4.

⁴⁶¹ *Buffalo Commercial Advertiser* 9 August 1850, 2; Hunter 1997, 293.

⁴⁶² Hunter 1997, 293.

⁴⁶³ Strong 1858, 290; Fischer 1874, 313; Hunter 1997, 292.

⁴⁶⁴ Hunter 1997, 292.

⁴⁶⁵ Fischer 1874, 319; Hunter 1997, 295.

cited, many observers and specialists on the matters believe this to be one of the primary causes of boilers bursting.⁴⁶⁶ Steamboat engineers were rarely men of science or extensive mechanical knowledge. These individuals usually received limited training in the handling of steam boilers and machinery, sometimes only three months or even six weeks.⁴⁶⁷ While most engineers were presumably told of the principal dangers associated with boilers and how to avoid them (maintain a particular water level, do not exceed maximum pressure buildup, etc.), they were merely machine operators and knew very little of the properties of steam. Ignorance aside, engineers were expected to follow orders issued by the vessel's captain, even if those orders included pushing the engine to unsafe limits.⁴⁶⁸ Time equaled money and if a steamer was to be successful in a competitive market, the vessel needed to be fast. In order to gain such a reputation, however, safety practices were regularly ignored, either under the direction of the captain or based on the engineer's own judgment. Pushing the machinery in this fashion was incredibly dangerous and an explosion could easily result.

Boiler explosions resulted from a variety of reasons and the most common of these are mentioned here. While poor construction, physical stresses, and operator error certainly played a large factor for why these phenomena take place, several other circumstances could potentially lead to a boiler explosion. These included defective supply pumps, clogged connection pipes, corroded safety valves, or foreign objects left inside the boiler.⁴⁶⁹ Additionally, internal boiler flues would occasionally fail or

⁴⁶⁶ Jones 1850, 134; Fairbairn 1851, 181-2; Thurston 1888, 38; Hunter 1997, 260, 296-9.

⁴⁶⁷ Hunter 1997, 260.

⁴⁶⁸ Hunter 1997, 297-9.

⁴⁶⁹ Hunter 1997, 295.

collapse, usually due to overheating from lack of water, with the result being an explosion.⁴⁷⁰ Many of the explosions that took place did not leave sufficient evidence for scientists and engineers to study, and therefore their causes can only be speculated. While experiments and controlled studies helped shine light on this topic, the exact causes of many boiler explosions will never be known.

What insights can be gained about the explosion on *Anthony Wayne*? The coroner's inquest following the disaster did not yield a conclusive explanation for the two starboard-side boilers exploding, and the crew members interviewed all specified that the machinery was running normally when the tragedy struck. Construction of *Anthony Wayne's* boilers could very well be the culprit. As previously mentioned, one of its port-side boilers suffered a lesser explosion in the fall of 1849, the cause of which was never stated. Since this boiler failed when it was less than a year old, it stands to reason that the other ones were also liable to rupture as well, even though the newspapers mentioned they were made "of the best iron, and of the best workmanship."⁴⁷¹ It should be reiterated that the repaired boiler from 1849 is not the one of the two that exploded, meaning that three of the four new boilers failed within a year of being installed.⁴⁷² Regarding internal and external stresses, these forces seem unlikely to be the primary cause of *Anthony Wayne's* explosion. Testimony reveals that the boilers were operating under maximum capacity and there were sufficient water levels in each of the four boilers. Additionally, there was very little wave action the night of the

⁴⁷⁰ Fairbairn 1851, 179-80; Borne 1855, 150-1; Wallace 1865, 51-4.

⁴⁷¹ *Toledo Blade* 4 May 1850, 2.

⁴⁷² *Daily Sanduskian* 30 April 1850, 2.

disaster, so it is unlikely that jarring or physical shock to the boiler brought about its destruction. Finally, Elmore, the engineer on duty at the time of the explosion, was praised by his colleagues for being a “steady and careful man and a good officer.”⁴⁷³ Of the man, Gore stated, “Mr. Elmore was one of the best engineers on the Lake, and was employed at an extra price for his superior skill and care as an engineer.”⁴⁷⁴ The engineer appears to have had the proper credentials and good sense to operate the machinery. Mismanagement seems to be out of the question, as all reports show a well-managed ship.⁴⁷⁵ Thus, of the three principal causative factors discussed, poor boiler construction appears to be the most likely reason for the explosion and is solely based on the fact that one of its other boilers suffered a similar fate less than a year earlier.

Another bit of evidence may shed light on the disaster. Before his death onboard the schooner *Elima*, Elmore allegedly stated that some of the boilers’ connecting pipes were clogged, which escaped his observation.⁴⁷⁶ This appears to be Elmore’s assessment of what took place and is completely possible, although there is no way to definitely prove this theory. Connection pipes could easily become clogged with mud, sediment, corrosion byproduct, debris, and even saw dust, but Gore claimed that the steamer’s boilers were overhauled in the early spring before the navigation season commenced.⁴⁷⁷ With the connection pipes blocked, steam could not make its way from the boiler to the

⁴⁷³ *Daily Sanduskian* 30 April 1850, 2.

⁴⁷⁴ *Toledo Blade* 1 May 1850, 2.

⁴⁷⁵ *Daily Sanduskian* 30 April 1850, 2.

⁴⁷⁶ *Toledo Blade* 14 May 1850, 2.

⁴⁷⁷ *Toledo Blade* 1 May 1850, 2. *Buffalo Commercial Advertiser* (28 March 1850, 2) featured testimony from one of *Troy*’s fireman, Eli Freeman, who stated that saw dust was occasionally used to stop boiler leaks, and that new boilers leaked often.

engine resulting in a buildup of pressure that could explode a boiler. This scenario is entirely possible, but Elmore's testimony regarding the pipes was not entered into the coroner's inquest and the theory can only be regarded as one of many possibilities.

The cause for *Anthony Wayne's* explosion may never be known. Further investigation into the historic record might yield more clues surrounding what happened onboard the steamer that fateful night, but the devastating results cannot be undone. The *Anthony Wayne* tragedy was but one of many to have taken place in 1850, and while it was not the worst, the story of its sinking resonated throughout the Great Lakes region and beyond, a grim reminder of the imperfections that still existed in steam technology.

CHAPTER V

THE *ANTHONY WAYNE* SHIPWRECK SURVEY: 2008-2009Previous Investigations

Two Ohio residents claimed to have found the wreckage of *Anthony Wayne* in 1988. Kellogg Roloaf and Matthew Vance, co-founders of Sea Reach Corp Salvage Company, located the site using a side-scan sonar unit in the waters off Vermilion. Vance described the site as “pretty broken up... the sidewheels are above the mudline. So is the bow. Everything else is anywhere from the mudline to 10 feet below the mud.”⁴⁷⁸ The pair further claimed that wreckage from *Anthony Wayne* was spread over a distance of 5 miles (8.05 km), although they did not specify what this wreckage consisted of nor did they indicate whether they investigated these pieces with side scan, scuba, or both.⁴⁷⁹

Their search for *Anthony Wayne* began with the belief that the steamer carried over \$100,000 in gold and silver specie at the time it sank. Roloaf stated, “The ship carried two strong boxes containing \$101,600 in pre-1850 gold coins,” although he did not specify where he obtained this information. Wanting to retrieve the strong boxes and profit from the cache of coins, the two petitioned the State of Ohio for a permit to salvage the wreck. This request came at a time when stewardship of Great Lakes shipwrecks passed from the federal government to the individual states with the passing of the Abandoned Shipwreck Act of 1987. Ohio did not have an adequate law in place to

⁴⁷⁸ *Cleveland Plain Dealer* 8 September 1991, 1B.

⁴⁷⁹ *Columbus Dispatch* 5 September 1991, 2A.

handle such a request and issue a salvage permit, and thus a decision was postponed until the state legislature could pass a proper law in regard to the management of its submerged cultural resources. In 1992, legislation was approved that protected historically significant shipwrecks from salvage and looting, prohibiting Roloaf and Vance from recovering *Anthony Wayne* or any objects belonging to the wreck. Presumably disappointed over the ruling, the two refused to release the coordinates for the wreck and its location continued to remain a mystery.

The extent to which Roloaf and Vance investigated *Anthony Wayne* is unknown. Newspaper articles from the early 1990s regarding the wreck's discovery did not mention any specifics beyond offering a basic site description, nor do these reports tell us what the divers did on the site. Furthermore, no photographs or drawings of the site were published in the public domain, so the condition of the wreck site at that time is not fully known.⁴⁸⁰

Prior to the 2008 Field Season

The re-discovery of *Anthony Wayne* in 2006 by the Cleveland Underwater Explorers (CLUE) was announced in association with the Great Lakes Historical Society (GLHS) in the early summer of 2007. In the fall of that year, the author contacted Carrie Sowden, Archaeological Director at the Society, and discussed the possibility of examining the remains of *Anthony Wayne* for a master's thesis topic. Sowden furnished

⁴⁸⁰ Roloaf and Vance were not contacted prior to, during, or after the 2008-2009 field investigations.

copies of CLUE's dive report, preliminary site sketches, side-scan sonar images, and the 1838 wood cut of the vessel (Fig. 17).⁴⁸¹

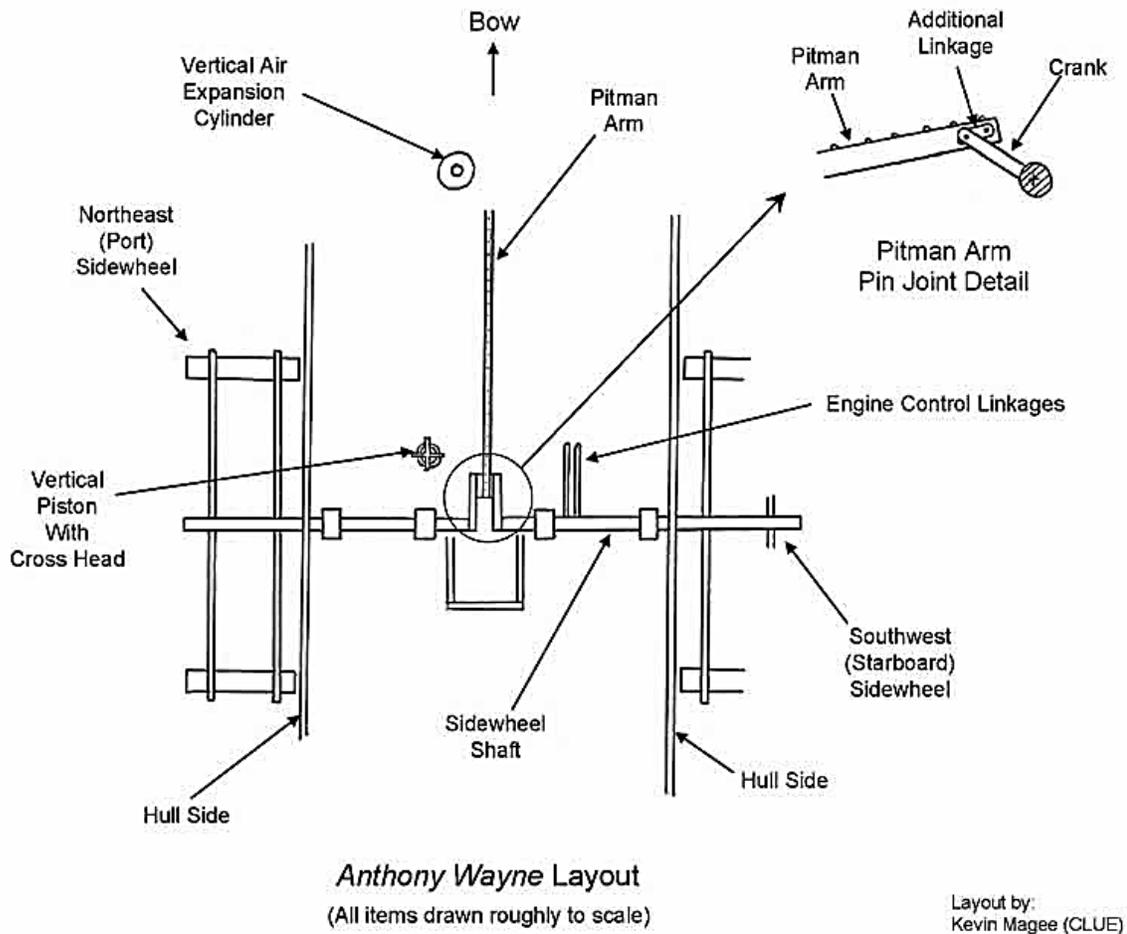


Figure 17: Preliminary *Anthony Wayne* site plan by Kevin Magee. (Courtesy of CLUE)

After reviewing the material, a partnership was formed between the Great Lakes Historical Society and the Center for Maritime Archaeology & Conservation (CMAC) at

⁴⁸¹ Appx. D.

Texas A&M University to investigate *Anthony Wayne*. The GLHS obtained the necessary permits from the Ohio Department of Natural Resources and the U.S. Army Corp of Engineers, organized lodging for the field crew, and raised the principle portion of the operating funds. At the same time, CMAC agreed to donate the majority of excavation equipment and scuba tanks in addition to providing supplemental project funding. Sowden and the author served as project co-directors as well as principle archaeologists, and were assisted by volunteers from Ohio's Maritime Archaeological Survey Team (MAST), Texas A&M University, and CLUE.

In preparation for the 2008 field season, the author traveled to Vermilion during March of that year to meet with Sowden and Christopher Gilcrist, Executive Director of the Society. Details of the project were discussed at length, including primary season objectives, the expectations of each party, the creation of an action item list, and delegation of responsibilities. Since scuba diving was essential to this study, logistics pertaining to dive plans and safety were also focused on. The remainder of the visit was spent in the Clarence S. Metcalf Great Lakes Maritime Research Library of the Great Lakes Historical Society going through historical newspapers and secondary sources looking for information on *Anthony Wayne*.

Funding for the 2008 field operations was provided by contributions from the Great Lakes Historical Society, Dr. Kevin Crisman and CMAC, Institute of Nautical Archaeology endowments, Ted and Betsy Wakefield, Spitzer Management Incorporated, and Ohio Department of Natural Resources- Office of Coastal Management. In-kind

contributions were donated by the Society, CMAC, Tom Kowalczk, Aqua Specialists (John Norris), CLUE, Romp's Marina, and Andy Morrison.

Diving on *Anthony Wayne*

Given *Anthony Wayne*'s location more than 7 miles (11.27 km) off shore and in 50 ft. (15.24 m) of water, dive safety was a high priority component of the project. Co-director Carrie Sowden doubled as the survey's dive safety officer and worked with the author to develop a safe and efficient dive plan for meeting field objectives. All participating divers were required to hold, at minimum, an Open Water Certification through a recognized scuba diving institution, as well as have diving insurance through the Divers Alert Network (DAN). Additionally, divers were expected to encounter limited visibility, cold temperatures, and potential entanglement hazards. Prior to the start of each field season, the Nautical Archaeology Program and Texas A&M University required dive safety officers to produce a detailed dive plan and emergency management plan.

Since diving was to take place every day during the scheduled field seasons, the directors attempted to make the site as accessible as possible. This included establishing a mooring line for the dive boat on the wreck as well as guide lines for divers throughout the site. The mooring line was established centrally on the site at the forward end of the pitman arm, allowing divers to descend right onto the wreck. This mooring line ensured that the team did not have to deploy the anchor each day and potentially damage the upright paddlewheels or other features of the wreck. Guide lines were strung from the pitman arm to various locations on the site to facilitate underwater travel in an otherwise

limited visibility environment. These guides were made of 0.25 in. (0.64 cm) yellow braided polypropylene line and were tied either to structural elements (e.g. hogging post) or to PVC stakes. The site's primary baseline also served as a guide line from the midship section of wreckage southward to the bow.

The basic dive plan took into consideration several factors for repetitive scientific diving and did not deviate much between the two seasons of field work. All diving occurred in teams of two and all divers breathed compressed air only. Nitrogen absorption was tracked using established diving tables from NAUI. Additionally, most divers dived with their own personal dive computers, which supplemented the profiles outlined in the dive tables. Each dive concluded when divers reached 45 minutes of bottom time, 1000 psi of air, or for any other reason thought appropriate by a diver (e.g. being too cold). Also, each diver was limited two dives per day with an ample surface interval in between. Given the depths and working times, decompression was not required, but divers were still required to take a 3 minute safety stop at 15 ft. (4.57 m) before reaching the surface.

The site is not very deep, but contains potential challenges for divers. Visibility can fluctuate daily from moderate to extremely poor. In 2008, visibility ranged from 1 ft. (30.48 cm) on the worst day to 15 ft. (4.57 m) on the best, with most days averaging around 3 ft. (91.44 cm) to 5 ft. (1.52 m). In 2009 visibility was more of an issue, as dredging brought visibility on site down to zero. The use of guide lines was essential to help divers from the mooring line to the work area and back again.

The second challenge was the temperature. Even though field work took place in the summer months, cold temperatures at depth could still affect diving. On average, surface temperatures ranged in the low 70°s F. A thermocline existed between 30 ft. (9.14 m) and 35 ft. (10.67 m), with the water below averaging 60° F (the coldest day was 55° F while the warmest was 72° F). The majority of the crew dived in either 7 mm neoprene wet suits or dry suits, in addition to wearing dive hoods and gloves. Divers used discretion when evaluating comfort levels and were encouraged to terminate the dive if they got too cold.

The third challenge associated with *Anthony Wayne* was the immense bio-fouling of the wreck due to zebra mussels. Zebra mussels have been an issue for Great Lakes shipwrecks and other submerged cultural material since their appearance in 1988.⁴⁸² Aside from their effect on the wreck itself, the mussels' shells are extremely sharp and can easily cut divers or their gear. To minimize risk of injury, protective gloves were worn at all times.

The final challenge was entanglement. While not much of *Anthony Wayne* remains above the mud line, the elements that are can easily pose a threat to divers. Broken paddlewheel arms, disarticulated paddlewheel bands, hogging posts, and frames can easily snag a diver. Also, fishing line and old dive lines were discovered in the 2008 season, posing yet another danger. All divers were equipped with dive knives able to cut lines, and caution was exercised when navigating around some of the more hazardous areas of the wreck.

⁴⁸² Griffiths et al. 1991, 1381.

2008 Field Season

The 2008 season lasted four weeks between 9 June and 8 July, with diving operations commencing on 16 June. The Great Lakes Historical Society, located on the shores of Lake Erie in Vermilion served as base of operations for the duration of the project. Field crew consisted of the author, Sowden, Will Moser, Kara Honthub, Mike Mossman, and Matt Mossman. For out-of-town crew members, accommodations were provided in the Peachman Lake Erie Shipwreck Research Center (PLESRC), located directly behind the Society and the Inland Seas Maritime Museum. The discoverer of the wreck, Tom Kowalczyk, offered the use of his 27 ft. (8.23 m) powerboat *Dragonfly* as a dive vessel and agreed to serve as project captain. While operations took place, *Dragonfly* was docked at Romp's Marina on the Vermilion River and served as the project's daily staging area.

The 2008 objectives consisted of an initial site assessment followed by three primary tasks. The first order of business was to map the entire site, including main wreckage components and associated debris. After mapping, the second objective was to obtain detailed measurements and sketches of exposed architectural and mechanical features on the wreck. The last objective consisted of systematic probing between the midship and bow sections in order to see how much, if any, of the steamer's hull was buried beneath the lake bottom. In the process of carrying out these tasks, the overall degree of preservation was noted along with any distinguishing features.

The daily schedule for the field crew took several factors into consideration, including data collection, diver safety, and the schedules of volunteers. The work week

ran Monday through Friday, with Saturday being reserved as a possible make-up day in the event of bad weather. On average, the crew woke at 6:30 am to get dive gear, equipment, and lunch food prepared. The crew met Kowalczyk at the marina at 8:00 am, loaded all necessary supplies aboard *Dragonfly*, and aimed for being out on the lake around 8:30 am. Travel time to the site varied based on water conditions, but the commute usually took between 15 to 20 minutes. After reaching the site and mooring the boat, pairs of divers made two dives a day to the wreck if possible, with dives separated by an ample surface interval. Because each dive was scheduled to last no more than 45 minutes, operations usually concluded in the early afternoon and saw the crew back at PLESRC around 2:00 or 2:30 pm. The afternoon hours were reserved for equipment maintenance, recopying dive notes and drawings, air fills, compiling daily field notes, and other necessary errands.

Field methodology employed for the 2008 season drew heavily from the underwater excavations conducted by Dr. Crisman on previous archaeological projects, and was integrated with documentation practices utilized by PLESRC. Since field objectives centered on mapping the site and recording details, basic underwater documentation equipment was used. The standard recording set-up consisted of mylar sheets duct-taped front and back to a plastic clipboard with two mechanical pencils tethered to the assembly. *Anthony Wayne* was constructed using Imperial units of measure and the site was recorded in the same fashion. Divers were equipped with 100 ft. (30.48 m) plastic survey measuring tapes in addition to soft plastic rulers. All

measurements and sketches were recorded at depth on the mylar sheets and then recopied upon returning to PLESRC.

To map the site, trilateration was determined to be the most efficient method. This was completed by establishing a baseline along the centerline of the wreck from the midships section to the bow. The baseline consisted of a 200 ft. (60.96 m) measuring tape securely zip-tied to a 0.25 in. (0.64 cm) yellow braided polypropylene line. The zero-end of the baseline was attached to the pitman arm's aft-end crank key, which also served as the primary site datum, and the graduated-end secured to the stem head. Key wreck landmarks were determined and assigned an alphanumeric value, with letters designating bow features and numbers for midships. Measurements were taken from each landmark to two different intervals along the baseline (e.g. to locate the position of the feed-water pump, measurements were taken from the center of the pump to the 90 ft. and 77 ft. marks on the baseline). As the wreck lies upright on a very flat lake bottom, little z-axis correction was needed for this documentation method. The baseline was fixed in place during the entire field season, allowing measurements to be retaken if needed in addition to serving as a guide line between the wreckage sections. In total, four full dives were needed to completely map in all designated landmarks. All collected trilateration data was oriented using underwater compass headings and plotted on a Cartesian grid using standard drafting tools.

The season's second objective entailed completing detailed construction drawings of each architectural and mechanical component featured on the wreck. Divers sketched each object, took specific measurements, and made comprehensive notations so

that reconstructions could be made on paper back in the lab. Measured drawings were made of the paddlewheels, hogging trusses, the main drive shafts, cranks, pitman arm, machinery, and the bow section. Recording began amidships on the port side, with focus on the paddlewheel and hogging truss. When this was completed, focus shifted to the drive shaft and the starboard hogging truss, followed by the starboard paddlewheel. Next, the pitman arm was examined at length, as well as the feed-water pump and feed-water heater. The final area to receive detailed inspection was the bow, which included the riding bits, rail, breasthook, and catheads. Both bow anchors are present on the site, but a small portion of each stock protruded up from the mud and without digging these received only limited study.

Also found on the site was a long piece of PVC pipe. The pipe, which is approximately 3 in. (7.62 cm) in diameter, crosses the port hogging truss 11 ft. (3.35 m) forward of the hogging post. The inboard end of the pipe was situated just forward of the feed-water heater; the outboard end of the pipe was never located as the majority of the pipe is buried, but its total length is estimated to be 40 ft. (12.19 m). It is not known when the pipe was placed on the wreck, but at least one line was discovered buried tying the pipe directly to the wreck and indicating that it was intentionally placed. Given the dimensions and orientation of the pipe, it likely served as a dredge or air-lift to remove sediment off the wreck.

To supplement the construction details, underwater photographs were also taken of *Anthony Wayne's* key features. Photographer Andy Morrison graciously provided his services and equipment over a two day period for this portion of documentation.

Morrison took several high-resolution images of the wreck itself as well as of archaeologists working on site. Limited visibility restricted wide shots, but approximately 60 usable photos were taken. Additional underwater photographs of the wreck were provided to the author for the purposes of this study by MAST member Jack Papes from dives made prior to the survey.

The last field objective called for systematic probing in the 75 ft. (22.86 m) distance between the exposed elements at the bow and amidships. No visible remains are present here, and the probing would allow us to ascertain the extent of buried hull structure. A total of four parallel lines were established between the bow and amidships, two on the port side and two on starboard. The outboard-most lines were each fixed to the hogging posts and ran to the extreme ends of the bow railing on either side, while the inboard lines attached between the middle of the drive shafts and the middle of the bow railing. These lines also consisted of 100 ft. (30.48 m) measuring tapes zip-tied to yellow polypropylene line. Probes were conducted along each line at 5 ft. (1.52 m) intervals. In addition to the four established lines, probe tests were also conducted in the same fashion along the baseline from the submerged end of the pitman arm to the bow. The probe itself was a 10 ft. (3.05 m) piece of 0.25 in. (0.64 cm) copper pipe with graduated markings taped along its side. Probing involved a minimum of two divers, one conducting the probe test and the other as a data recorder. At each mark, one diver drove the probe home until it reached solid resistance, at which point the test was considered a positive hit and the depth recorded by the second diver. If the probe reached a depth of

10 ft. (3.05 m), the total length of the probe, without coming into contact with any resistance, that test was deemed a negative result.

In total, 78 probe tests were conducted during the course of three full dives split between two days. Of that number, 48 tests had positive returns while the remaining 30 tests encountered no sub-surface material (Fig. 18). The breakdown of results from each line is as follows:

- Line S2 had 4 positive tests and 10 negatives;
- Line S1 had 16 positives tests and 2 negatives;
- Line BL had 9 positives tests and 4 negatives;
- Line P1 had 15 positives tests and 3 negatives;
- Line P2 had 4 positives tests and 11 negatives.

Positive tests ranged from depths between 3 ft. (91.44 cm) and 9 ft. 9 in. (2.97 m) beneath the lake bottom. On average, the more shallow positive hits occurred closer to midships, whereas the deeper hits were located in the intermediate zone between the two sections of wreckage. The inboard lines yielded a substantially greater numbers of positive returns than the outboard lines. The results of the probe testing clearly indicated that a significant portion of *Anthony Wayne's* structure is buried beneath several feet of sediment. Time did not allow for a more thorough sub-bottom investigation during the 2008 season, but the data collected quantified, to an extent, just how much material existed below the lake bottom and at what depth this material is buried.

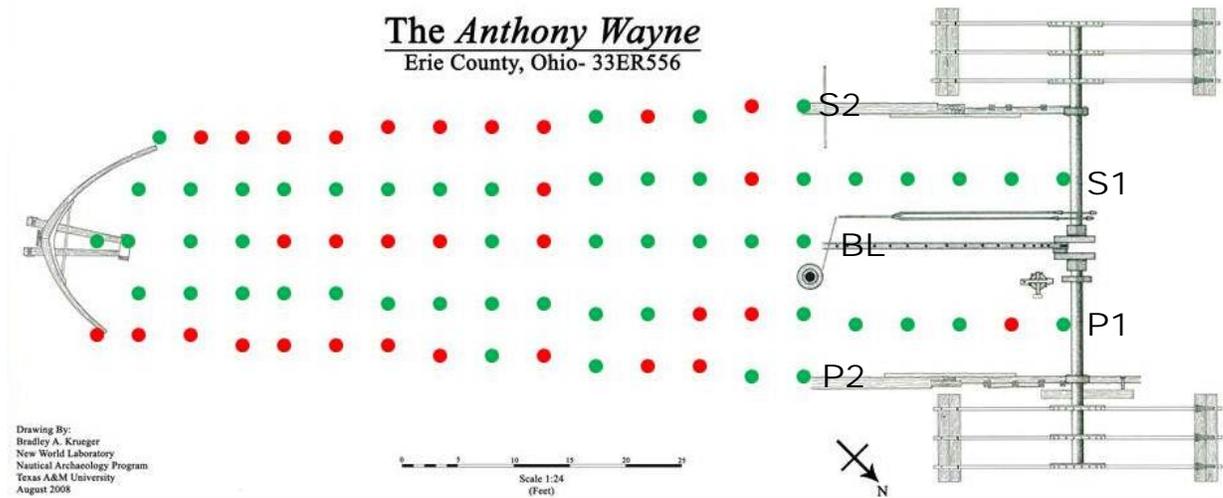


Figure 18: Results from Systematic Site Probing.

The final step of the season was the removal of all survey equipment and restoring the site to its original condition. This involved removing all dive lines, probe lines, the baseline, and all associate material. The mooring line was also removed from the pitman arm and taken off site. This also included older dive lines that were attached to the wreck prior to 2008. An attempt was made to lift the intrusive PVC pipe off the wreck, but its length and weight prevented us from doing so. Since the primary datum used for site recording was a feature of the wreck (i.e. the pitman crank-key), no markers or tags were left behind.

In all, 72 dives were made on *Anthony Wayne* during the 2008 season. This equates to 3028 minutes of cumulative bottom time, or just over 50 hours spent on site. All diving was completed over 12 days, with five of the 15 scheduled working days

canceled due to weather. This necessitated three make-up days to complete all season objectives.

Prior to 2009 Field Season

After the conclusion of the 2008 field season, efforts shifted to analyzing the collected data and preparing for the 2009 season. This included producing a 1:48 scale site plan in addition to several smaller illustrations highlighting construction details (Fig. 19). Nautical Archaeology Program graduate student Ryan Lee used the site plan with additional measurements and sketches to create a three-dimensional computer generated site plan (Figs. 20, 21). Perspectives such as these were immensely helpful to the project and envisioning the site, as limited visibility prevented the team from capturing panoramic photographs or video footage. The data from probe testing was also carefully considered in order to determine what areas would be prime choices for further investigation. Since a large percentage of positive hits occurred just forward of the midship section of wreckage, this location became a high priority area and it was decided excavation should take place in this area.

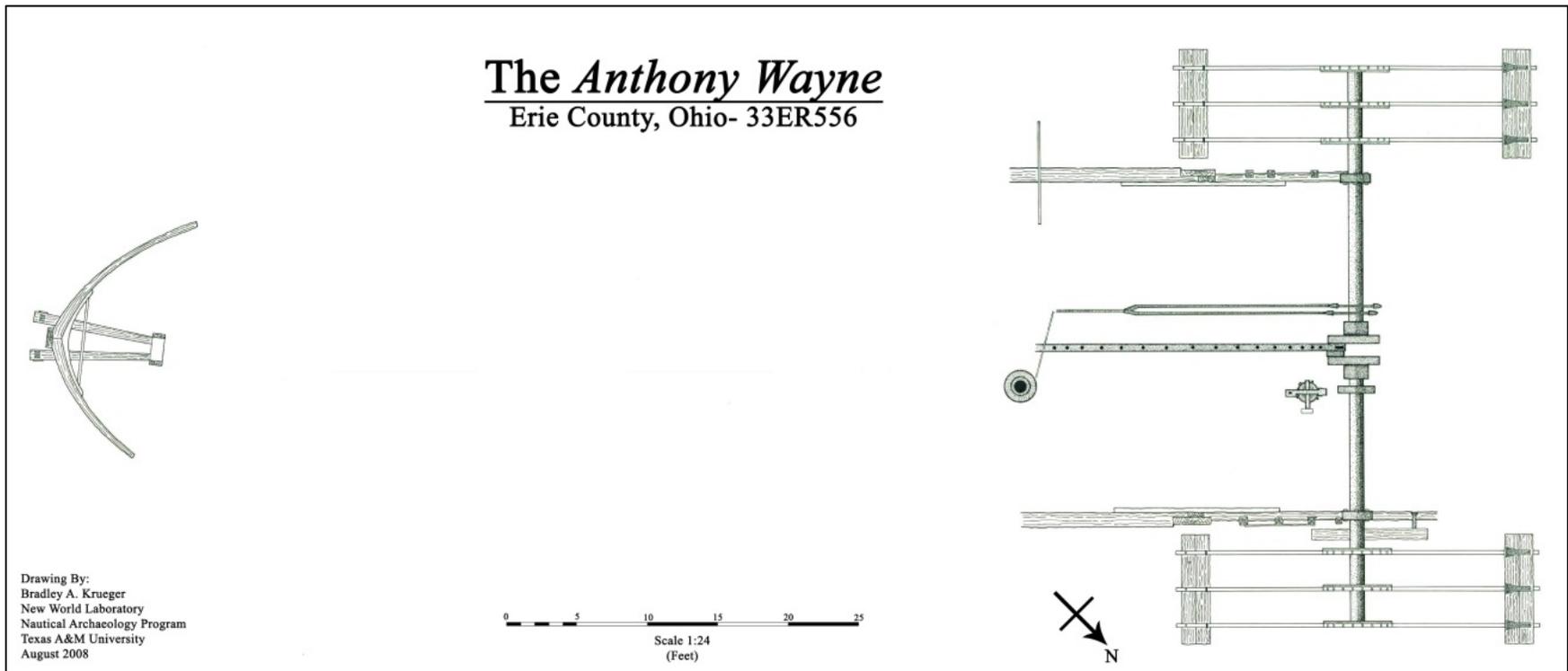


Figure 19: 2008 site plan of *Anthony Wayne*.



Figure 20: Three-dimensional site plan of *Anthony Wayne*. (Courtesy R. Lee, 2009)



Figure 21: Looking aft on three-dimensional site plan. (Courtesy R. Lee, 2009)

Since excavation constituted the next phase of the project, Sowden and the Great Lakes Historical Society worked to obtain all necessary permits. This included a permit from the Ohio Department of Natural Resources to disturb archaeological material and another from the U.S. Army Corp of Engineers to alter the bottomlands of Lake Erie. These permits were the first of their kind for underwater excavation in Ohio waters.

The final consideration was to secure funding and equipment for summer field work. The 2009 season was supported financially by the Great Lakes Historical Society, CMAC, the Institute of Nautical Archaeology (INA), the Ohio Department of Natural Resources- Office of Coastal Management, and the Ohio Council of Skin & Scuba

Divers. In-kind donations were provided by the Society, CMAC, INA, Kowalczk, CLUE, Aqua Specialists, and Romp's Marina.

2009 Field Season

The *Anthony Wayne* Shipwreck Survey resumed field investigations in the summer of 2009. The work conducted in 2008 generated much enthusiasm and thus the project expanded for this year's operations. The field season ran for six weeks, from 1 July to 18 August, with the diving starting on 6 July. Crew size increased overall and saw the return of the author, Sowden, Kowalczk, Moser, and the Mossmans. New to the team this year was Heather Jones, Christy Misterka, Tyler, Cullinan, Taylor Brooks, and David VanZandt. PLESRC continued to serve as base of operations as well as lodging for out-of-town crew, and Romp's Marina was again the project's staging ground.

The objectives of the 2009 seasons were strongly influenced by the results of the probe testing the year prior and focused on investigating buried components of the wreck. Therefore, the project set out to accomplish three principal objectives: uncover elements of the vessel's port-side hull; locate and uncover the horizontal steam engine; and investigate the stern section of the site, where no visible remains are present. To meet the first two objectives, concentrated excavation was required at two locations amidships, while the third objective was to be carried out with remote sensing equipment. Finally, additional measurements and construction details were obtained that could not be collected the previous year.

Underwater excavation required specialized equipment. The project utilized an induction dredge system in the form of a 3 in. (7.62 cm) 3.5 horsepower Honda trash pump (Fig. 22). Attached to the pump's intake valve was a 5 ft. (1.52 m) length of 3 in. (7.62 cm) corrugated Tiger-flex hose capped off with a filter. To maximize suction at depth, the pump's outtake was fitted with a 3 in. (7.62 cm) to 2 in. (5.08 cm) reduction coupling, to which was attached a 75 ft. (22.86 m) length of 2 in. (5.08 cm) collapsible fire hose. The distal end of the fire hose was then joined to the 2 in. (5.08 cm) intake of a steel dredge head. The dredge's suction end coupled to a 12 ft. (3.66 m) section of 3 in. (7.62 cm) Tiger-flex hose, while the discharge, or spoil, end had attached a 40 ft. (12.19 m) section of Tiger-flex. All sediment passed through a 0.25 in. (0.64 cm) wire screen dredge cap which fit over the suction end of the dredge hose. This cap allowed for the discovery of small artifacts and also minimized the chance zebra mussel shells would clog the dredge. The spoil end of the dredge was led off the wreck to the northeast approximately 30 ft. (9.14 m) and secured to the lake bottom via a PVC stake and polypropylene line. This location was chosen due to Lake Erie's natural west-to-east water flow, meaning sediment discharged into the water column would not pass back over the site. To help navigate to this area, a dive line was established between the PVC stake and the port hogging post.

During field operations, the pump was mounted on a 14 ft. (4.27 m) aluminum fishing boat that served as the project's pump barge (Fig. 22). Nicknamed *The Guppy*, this small boat was towed out to the site behind *Dragonfly* and then moored directly to the wreck at the pitman arm. In addition to the pump and its hoses, the small boat was

also equipped with a gas can, fire extinguisher, bucket, oars, flotation device, and an umbrella. A single pump tender was always onboard and responsible for starting, stopping, and refueling the pump. Once *The Guppy* was in position and the intake hose placed in the water, archaeologists would descend to the site with the collapsible fire hose and attach it to the dredge head. Communication to the surface was achieved through tethered marker buoys (i.e. a bright yellow water bottle tied to a 50 ft. (15.24 m) piece of nylon cord). When archaeologists needed the pump turned on, the buoy was deployed and kept on the surface for as long as the pump was to remain running. When the pump was to be turned off, archaeologists reeled in the buoy.



Figure 22: Honda trash pump aboard *The Guppy*. (B. Krueger, 2009)

The schedule of daily operations was similar to that of the previous year, with work taking place from Monday to Friday, with Saturday being a weather make-up day. The crew woke around 6:30 am, arrived at Romp's Marina just before 8:00 am, and began diving around 9:00 am. Divers entered the water, swam to the pump barge, collected the fire hose, and descended to the site. Since dives were made in pairs, one diver acted as principle excavator while the other kept track of time, air, and offered any needed support. After the fire hose was connected to the dredge head, the excavator got into position and the second diver deployed the marker buoy. When the buoy reached the surface, the pump tender started the pump and excavating began. Since excavating is significantly more taxing than recording, air consumption and diver fatigue were closely monitored. Time at maximum depth was not to exceed 40 minutes, which meant total dives were, on average, 45 minutes long. Given that only one pump was in operation for excavation purposes, only one team of divers were on the site at a time, with two teams each completing two dives per day. Diving concluded in the early afternoon and saw the crew returning to the marina usually around 2:00 pm. The late afternoon and evening hours were spent recopying dives notes, getting air fills, drawing, and completing necessary errands.

Test Unit 1

The first objective of the season was to open an exploratory unit, test unit 1, on the port-side of the wreck just forward of the hogging post (Fig. 23). The goal was to follow the hogging truss timber forward into the mud and move inboard toward the

centerline of the vessel in order to locate any elements of the hull (i.e. frames, planking, etc.). This would allow archaeologists to record the shape of the hull at this location, observe construction details, and assess the overall degree of preservation of buried components.

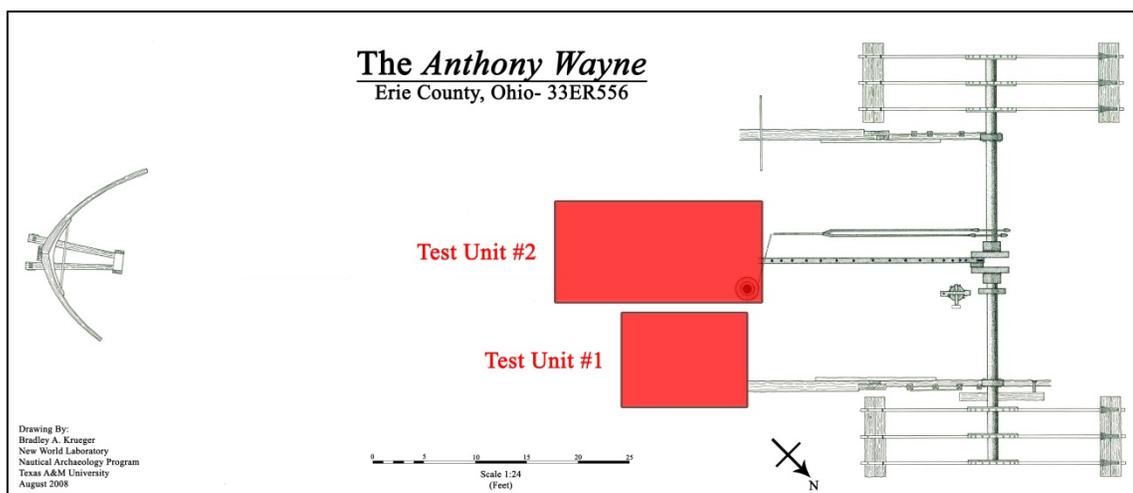


Figure 23: Location of test unit 1 and test unit 2.

Two weeks were spent conducting systematic excavations in this area. Given the soft, gelatinous nature of the lake bottom, sediment was excavated in arbitrary levels with depths recorded at the beginning of each work day, when visibility was the best. On average, each day saw 9 in. (22.86 cm) of sediment cleared from the test unit. No distinct stratigraphy was encountered during excavation with the exception of an overburden layer approximately 2 in. (5.08 cm) deep consisting primarily of zebra mussel shells. Beneath this layer the lake bottom substrate was a uniform dark greenish gray color with no further evidence of distinct stratigraphic gradient. At the end of this

period, test unit 1 reached a final size of 12 ft. (3.66 m) long (longitudinally along the wreck) by 8 ft. (2.44 m) wide and reached a maximum depth of 8 ft. (2.44 m) deep, yielding a total of 768 cu. ft. (21.75 cu m) of removed sediment.

The only structural element encountered in test unit 1 was the hogging truss timber; no other hull remains were discovered (Fig. 24). The truss timber crossed the test unit laterally and continued downward into the mud on the forward wall. Being buried has significantly aided to the preservation of the wood, which appeared to be incredibly sturdy and exhibited no signs of deterioration. No fasteners were discovered nor were any fastener holes observed. Before moving on to the next area, a series of probe tests were conducted transversely along the bottom of the unit with the 10 ft. (3.05 m) probe. All of the four probe tests taken were positive hits at depths ranging from 5 ft. (1.52 m) to 6 ft. (1.83 m). To ensure the continued preservation of the uncovered timber, the test unit was back-filled prior to the end of the field season.

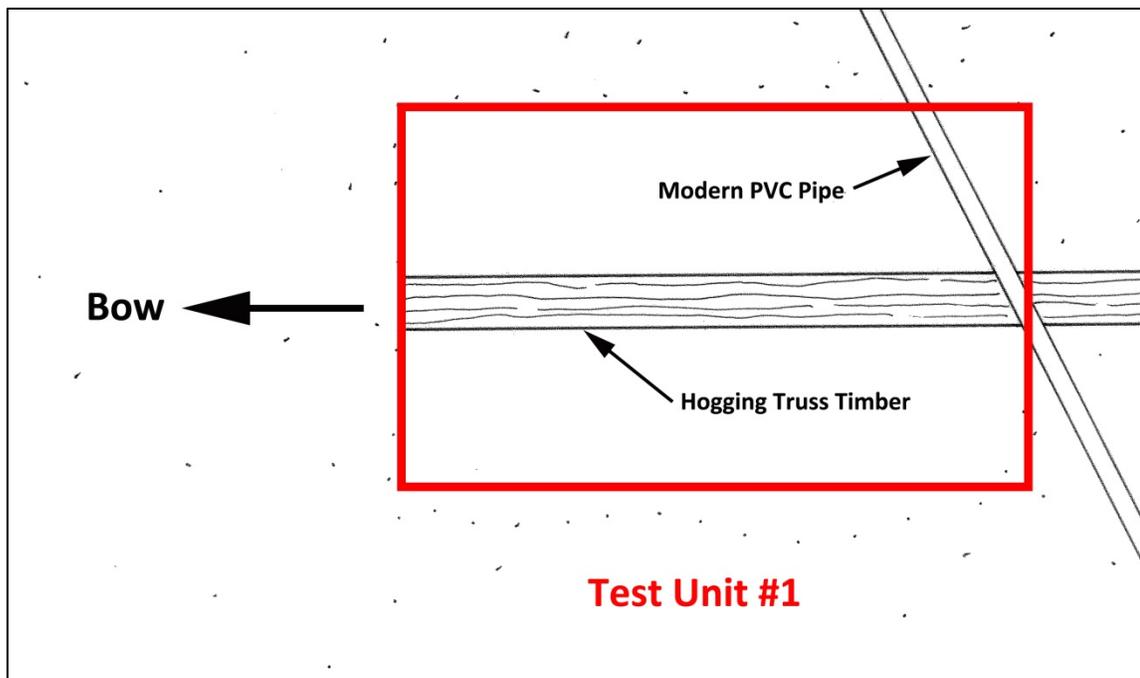


Figure 24: Test unit 1 detail, showing port diagonal truss timber.

The only artifact encountered from test unit 1 was a beer can from the mid-20th century. Located at a depth of 5 ft. (1.52 m) and situated beneath the hogging truss timber, the conical topped can once contained E and B Special Beer (Fig. 25).⁴⁸³ The suspected *terminus ante quem* for manufacture is 1944, but the date of deposition could not be determined. The finding of the can at this depth gives a glimpse of the depositional history of the site and the amount of sediment accumulation that has occurred after the steamboat sank to the lake bottom. Since the can was not

⁴⁸³ According to the website MI Beer Cans (<http://www.mibeercans.com>), this can was manufactured by Ekhardt and Becker Brewing Company of Detroit, MI. The company was in operation from 1932 to 1962. The can itself has a high profile conical top, and lacks a statement regarding alcohol content. The word *and* appears in the title, as opposed to an ampersand, suggesting a manufacture date prior to 1944. This is supported by the presence of the Internal Revenue Tax Paid statement that was required on all beer cans from 1935 to 1950.

contemporaneous with the wreck, it was not cataloged as an artifact, but did receive sketches and photographs before being re-deposited back on site.



Figure 25: E and B Special Beer can from test unit 1. (W. Moser, 2009)

Test Unit 2

The second objective of the season involved opening a second unit, test unit 2, for the purposes of locating and documenting *Anthony Wayne's* steam engine. The steamer was deemed a total loss following its 1850 boiler explosion and no efforts to salvage the vessel were reported, suggesting that the engine should still be on site.

Uncovering the engine would allow archaeologists to observe the type of engine, assess its degree of articulation and preservation, and record all details and features.

Three weeks were spent excavating this test unit. Excavations began around the visible portion of the pitman arm and proceeded forward and down until the excavators met with other components. As seen elsewhere, a 2 in. (5.08 cm) to 3 in. (7.62 cm) shell layer was encountered in this area, with substrate matching that of test unit 1 (i.e. a dark grayish green gelatinous matrix). When machinery was encountered, the test unit was extended further forward and then brought down. Thus, a uniformed unit bottom was not maintained, but daily depths were recorded each morning. At the end of excavations, the test unit's final size was 20 ft. (6.10 m) long (longitudinally along the wreck) by 8 ft. (2.44 m) wide by 6 ft. (1.83 m) deep, representing a total of 960 cu. ft. (27.184 cu m) of sediment removed.

Excavation in this area uncovered *Anthony Wayne's* intact and articulated horizontal steam engine (Figs. 26, 27). Working down the pitman arm's forward end quickly exposed the crosshead linkage, and attached to that the engine's piston. The piston ran forward and disappeared into the engine's cylinder, atop of which sat four large iron steam release levers. The entire upper half of the cylinder was uncovered to its forward end. The engine's iron elements exhibited light surface corrosion and some pitting, while the brass fittings appeared new. The crew spent several dives documenting the engine assembly, which included recording measurements, sketching details, and taking photographs of all exposed elements. After documentation was complete, the test unit was thoroughly back-filled over a two day period.

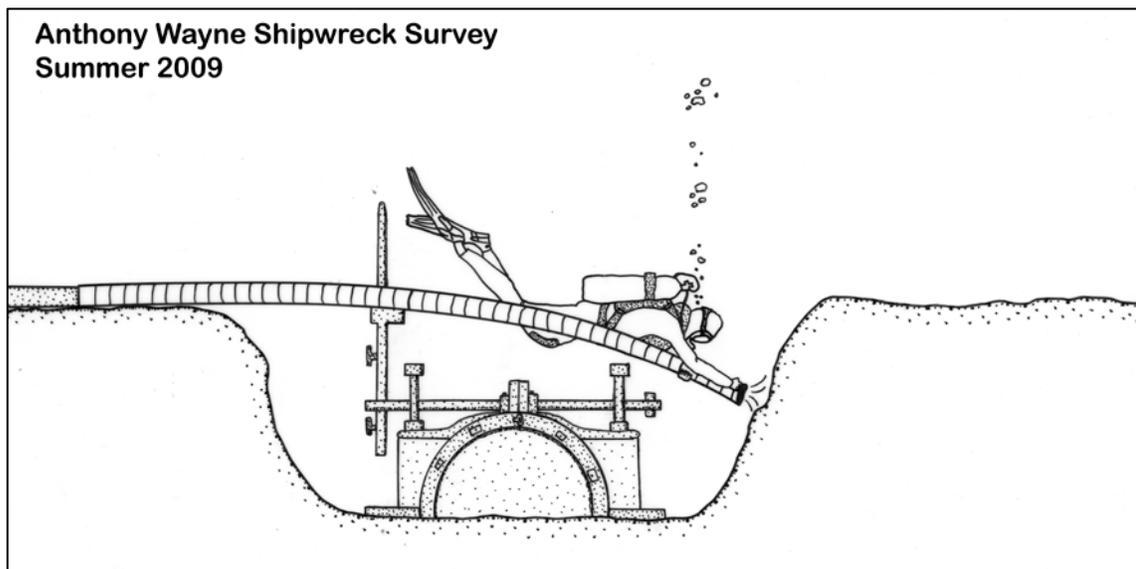


Figure 26: Exposing *Anthony Wayne's* horizontal steam engine.

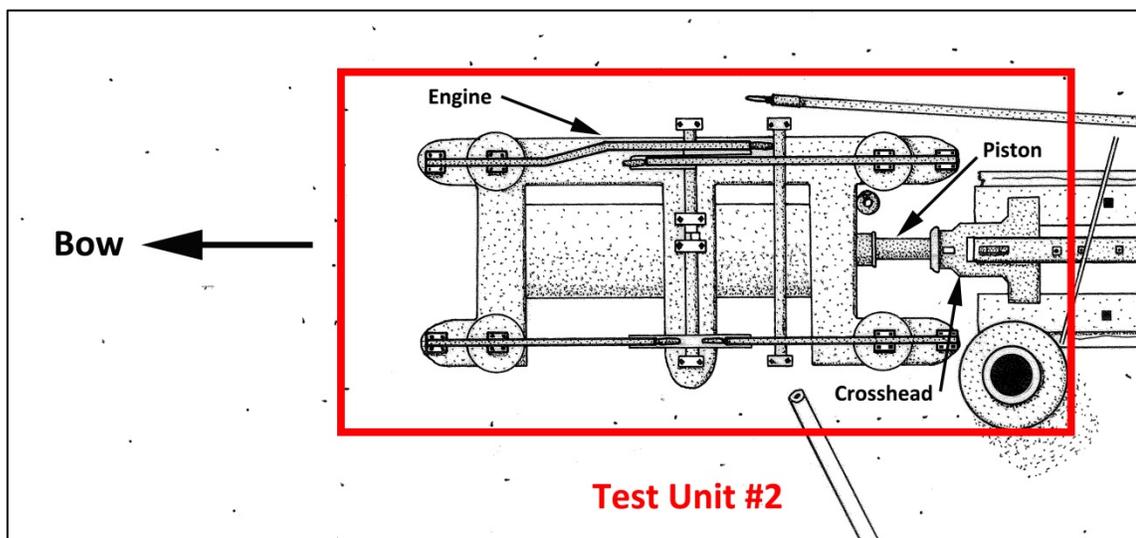


Figure 27: Test unit 2 detail, showing steam engine.

During the course of excavating test unit 2, a small sample of artifacts was encountered. All artifacts were brought to the surface for documentation purposes, but permits did not allow for artifact recovery, and so these finds were returned to the site. Artifacts fell into three general categories: wood, metal, and glass. Before being re-deposited, each artifact was sketched, measured, and photographed. A catalogue and description of the finds can be found in Chapter 6.

Aside from the excavation portion of field activities, additional details and measurements were collected that were either not obtained during the 2008 season or proved conflicting in preparing the site plan. This primarily included the starboard drive shaft cams, cam linkages, and more features of the bow. Additionally, a digital goniometer was used to capture angle measurements of the wreck's more prominent elements (e.g. hogging trusses, pitman arm, etc). The goniometer was calibrated on an even surface on land and then placed into a water-tight housing for use at depth. All angle measurements were recorded on mylar and incorporated into drawings back at PLESRC.

The last phase of the 2009 season included a short remote sensing survey of the wreck's stern section. With no visible remains abaft the paddlewheels, it was decided to cursorily explore this area to see how much, if any, archaeological material exists. The survey team had access to an Imagenex DF 1030 sub-bottom profiler which was used during the course of an afternoon. To ensure the sub-bottom profiler maintained a level position in the water column, the device was attached to a wooden sled and towed transversely across the stern section of the wreck. Each transect was spaced

approximately 25 ft. (7.62 m) starting close to the wreck and working away from it in a northwesterly direction. The collected data confirmed that hull material is buried in this area up to 50 ft. (15.24 m) away from the paddlewheels. The remains in this area, which measure approximately 25 ft. (7.62 m) transversely across the wreck, are buried under 3.5 ft. (1.07 m) of sediment (Fig. 28). Time did not allow for further investigations in this area, but knowing that a substantial portion of the vessel exists beneath the mud met the objective.

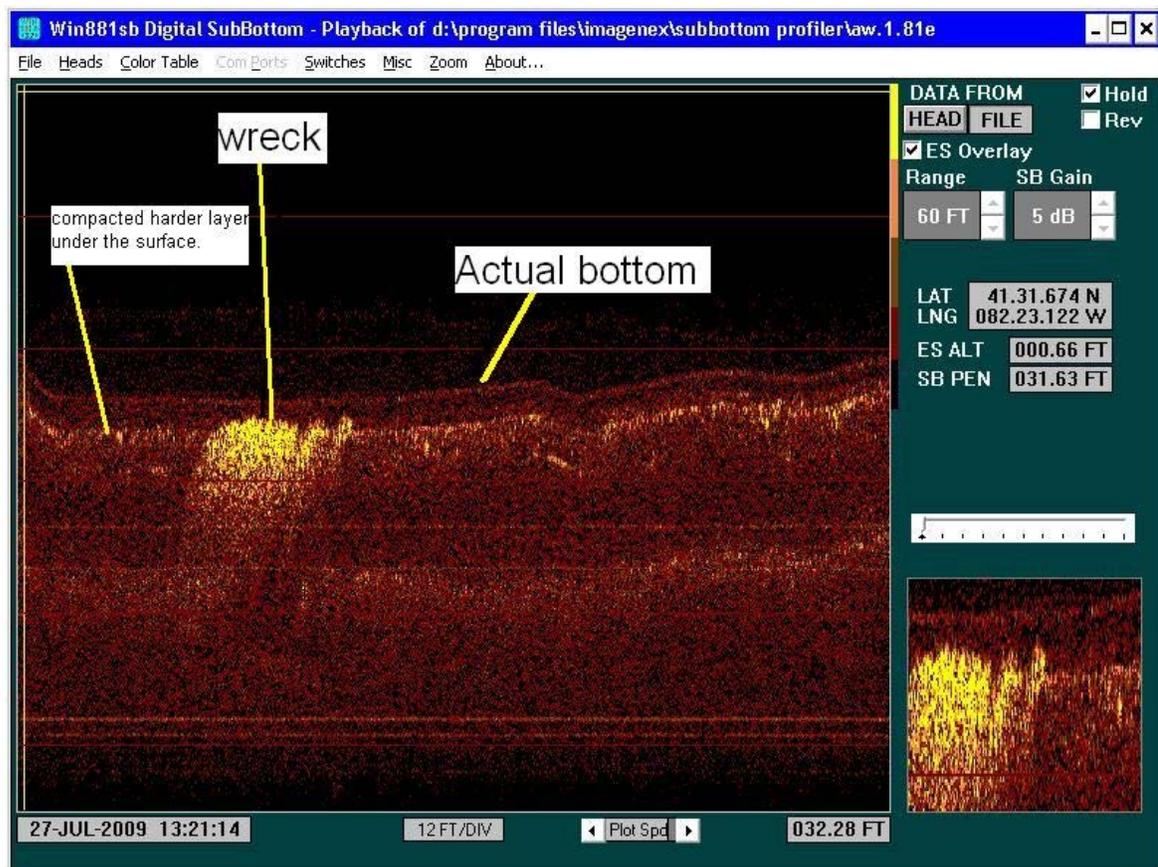


Figure 28: Sub-bottom profiler data of *Anthony Wayne*'s stern area. (Courtesy T. Kowalczyk)

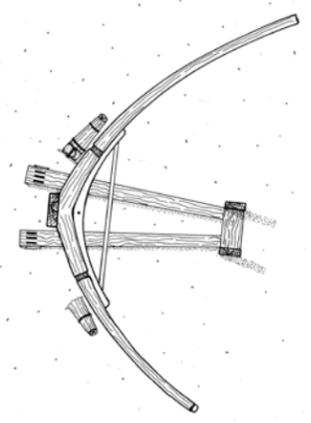
Before the field season closed, the survey team returned the site to its original condition, which primarily included back-filling the two excavated test units. Test unit 2 was back-filled using the induction dredge in reverse, while test unit 1 was back-filled by hand. Natural processes, such as water flow and sedimentation, also assisted the team in filling the units. All dredge equipment, dive lines, and survey tools were collected and removed from the site. An attempt was also made to cut and take out the large PVC pipe crossing over the wreck, but this proved unsuccessful and the pipe was left in place as originally found. As with the previous season, no survey tags or markers were left on the site.

In total, 158 dives were made on *Anthony Wayne* during the 2009 season. Cumulative bottom time was calculated at 7552 minutes, or slightly greater than 125 hours. Diving occurred 26 days out of the scheduled 30 working days, as weather was much more cooperative than the previous season.

The final component of the field season was to produce an updated site plan (Fig. 29). This revised plan featured material encountered in the two test units, as well as additional machinery and architectural details that were recorded in 2009.

Steamboat *Anthony Wayne*

Erie County, OH- 33ER556



Drawing By:
Bradley A. Krueger
New World Laboratory
Nautical Archaeology Program
Texas A&M University
January 2010

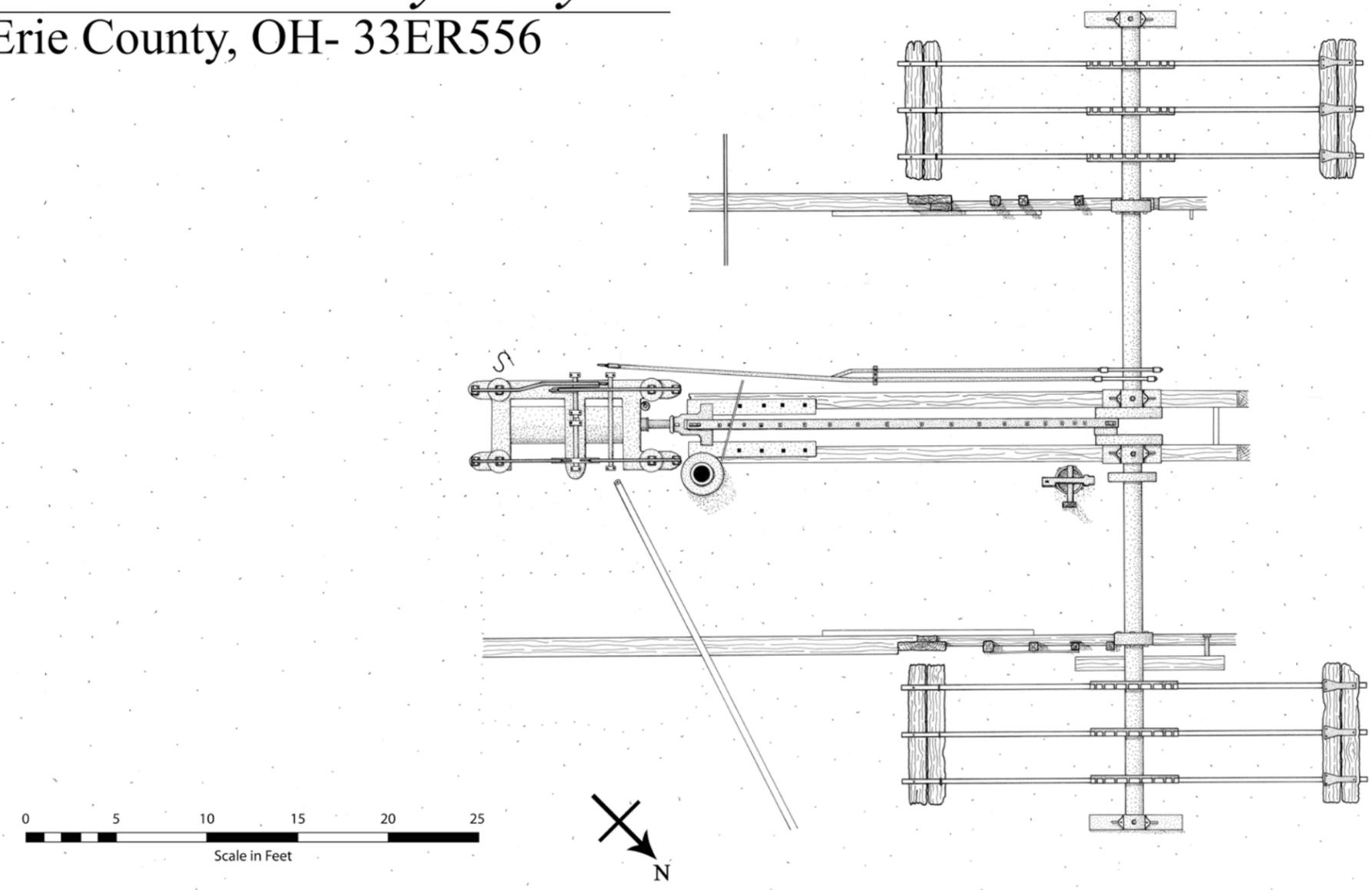


Figure 29. 2009 site plan of *Anthony Wayne*.

CHAPTER VI

THE CONSTRUCTION AND PROPULSION MACHINERY OF *ANTHONY WAYNE*

BASED ON THE ARCHAEOLOGICAL INVESTIGATIONS OF 2008-2009

Introduction

Very little of the steamboat *Anthony Wayne* is exposed above the lake bottom. The wrecking event stripped the steamer of its upper works and no evidence was encountered to suggest these pieces are present on site. What remains are two large sections of wreckage separated by 60 ft. (18.29 m) consisting of the midship and bow portions of the vessel. No remains are visible between the two sections, but systematic probing confirmed hull material exists buried under several feet of mud. Exposed portions of the steamboat include the bow, hogging truss, and propulsion machinery. This chapter will present the details of both the architectural and machinery elements of the wreck. This chapter is comprised of three sections. The first covers the hull and hogging truss. The second focuses on the mechanical components, including its drive system, and the third deals with loose artifacts encountered during the 2009 excavation.

Ship Construction

The Hull

The hull of *Anthony Wayne* was completely buried and could not be examined during the course of field operations. The 2009 excavations on the steamer's port side

yielded no glimpses of the hull beyond the hogging truss. The absence of architectural elements in the test unit and the results from the probing exercise and remote sensing survey indicated that the hull is located further down in the substrate. It is not known what state the hull is in or how well it is preserved. It is possible that when the steamer struck the bottom, the main deck and the sides of the hull were significantly damaged to the point of separating from the vessel; our inability to find the port side forward of the machinery suggests this was the case. These potentially separated pieces were not encountered during the survey, but could possibly still be present on site.

Despite the scant remains, however, our investigation examined the wreck in a macro perspective. This primarily involved taking large scale measurements to see where particular features exist and see how the dimensions matched up with historical documentation. The first measurement considered was the overall length of the vessel. *Anthony Wayne*'s recorded length was 155 ft. (47.24 m) following the steamer's 1848-49 rebuild.⁴⁸⁴ While it was impossible to obtain this measurement given that the hull is buried, the distance from after face of the stem to the center of the drive shaft was 91 ft. 6 in. (27.89 m). This measurement offers two possible scenarios regarding the placement of the paddlewheels. A review of side-wheel steamboats from the 1830s and 1840s shows that it was a common construction practice to place paddlewheels either at or slightly abaft amidships, and both are sound possibilities in the case of *Anthony Wayne*. The first scenario assumes that the two pieces of wreckage are in their original positions, which means the paddlewheels were located just abaft the hull's center point by

⁴⁸⁴ 1849 Enrollment (Appx. B).

approximately 15 ft. (4.57 m). On the other hand, the second scenario places the paddlewheels at exactly amidships, suggesting that the bow section is disarticulated from, and rests forward of, the wreck. The bow today is skewed slightly to starboard, which strengthens the argument for the latter interpretation, but given the lack of exposed hull components a conclusive determination cannot be made either way.

The second measurement used to assess the overall hull was the breadth. Measurements were taken at the wreck's amidships section from the interior of the hogging posts, the distance of which is 24 ft. 4 in. (7.42 m). This does not match up with the dimensions following the steamer's refurbishment, which was recorded at 27 ft. 4 in. (8.331 m). The same measurement taken from the outsides of the hogging truss timbers is 25 ft. 10 in. (7.87 m), 1 ft. 6 in. (45.72 cm) short of the historical dimension. Not knowing where the hull inspector took the 1849 measurement makes it difficult for an accurate comparison to be performed, although it was probably measured to the outside faces of the frames. The archaeological and the historical breadths are certainly close, and a margin of error must be considered due to the violent nature of the sinking and the post depositional processes that have been at work for the past 160 years.

Bow Section

The bow section offered the most complete construction details for the hull itself. While the majority of the wreckage was buried, certain exposed pieces above the main deck were accessible for study. These elements included the stem head, cap rail, a breasthook, toe rail, deck beams, catheads, and riding bitts (Fig. 30). No deck planking

was present and appeared to have separated from the wreck sometime either during or after the sinking event.



Figure 30: *Anthony Wayne*'s bow section. (A. Morrison, 2008)

Stem Head. While the stem itself was not visible, the steamer's stem head protruded up from the mud. The stem head was sided 1 ft. 5 in. (43.18 cm) and molded 9 in. (22.86 cm) beneath the cap rail, and had an observed length of 5 ft. 7 in. (1.70 m) from its top face to the lake bottom. The after face of the stem head had a 4 in. (10.16 cm) wide by 4 in. (10.16 cm) deep notch cut into it to receive the cap rail.

Cap Rail. Fitted into the upper portion of the stem head was the bow cap rail (Fig. 31). This cap was present on both the port and starboard side, and composed of an

upper timber stacked atop a lower timber. A vertical butt joint at the middle of the stem head joined the port and starboard caps. The cap rail was widest and thickest at the stem head and tapered slightly toward its extremities. At its largest point the rail was 7.5 in. (19.05 cm) molded and sided, and decreased to 4.5 in. (11.43 cm) sided by 6 in. (15.24 cm) molded. On the port side, the upper cap rail extended 12 ft. 8 in. (3.86 m) abaft the stem head, while the starboard side upper cap rail was 8 ft. (2.44 m) long. The lower cap on both sides each continued aft a short distance past the upper cap then terminated in a break.

Two rectangular notches or chocks, one on each side of the stem, were cut into the upper cap rail. The notches measured 2 in. (5.08 cm) wide, were situated 2 ft. 3 in. (68.58 cm) from the stem head, and exhibited a good deal of wear suggesting they once held mooring lines or cables.

The components of the cap rail were fastened with iron nails and spikes. An accumulation of zebra mussels and marine growth coupled with limited visibility prevented the survey team from determining precise fastener locations. On average, the spike heads observed measured 0.75 in. (1.91 cm) square and appeared to be approximately 4 to 5 in. (10.16 to 12.7 cm) long.

An iron eye bolt with attached thimble was driven into the port cap rail's upper face near the butt joint, one of four present in the bow assembly. These iron fastenings were likely part of the steamer's rigging configuration, as *Anthony Wayne* was outfitted with a single foremast. The eye bolts may have anchored the forestays, and while the

hardware remains, no evidence of cordage or cable was encountered.⁴⁸⁵ This eye bolt head had an inner and outer diameter of 1.5 in. (3.81 cm) and 2.5 in. (6.35 cm) respectively, and was covered with marine growth and some surface corrosion. The second and third eye bolts were located on the cap rail abaft of the forward-most rail stanchion, and had the same dimensions as the one previously mentioned.

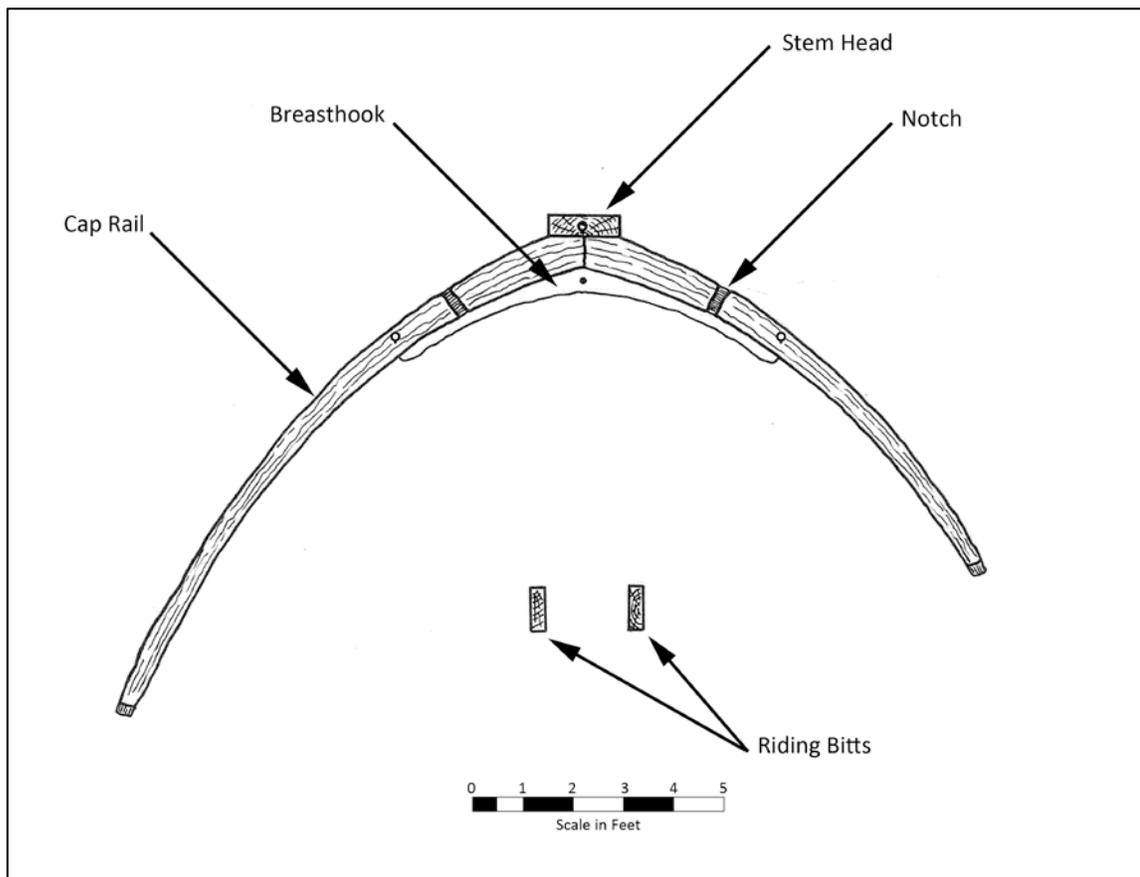


Figure 31: Detail of bow's cap rail.

⁴⁸⁵ Robinson 1999, 132.

Rail Supports. The join of the stem and cap rails was supported by a breasthook, or wooden knee, on the inboard face of the rails (Fig. 32). The breasthook was made of a single timber and survived intact. The timber measured 6 in. (15.24 cm) wide at its midpoint and tapered to 3 in. (7.62 cm) at both ends, and was molded 3 in. (7.62 cm). Its total length from end to end, in a straight line, was 7 ft. 8 in. (2.34 m). The breasthook was secured to the inside of the rail with transversely driven iron nails or spikes. The center of the breasthook had a circular notch on its upper face. The diameter of the notch measured 2.5 in. (6.35 cm) and exhibited a good deal of wear, especially on its forward-most edge.

Four wooden stanchions supported the cap rail from the underside (Fig. 33). The stanchions were uniform in style, hexagonal in the middle, 3 in. (cm) wide, that changed to cylindrical at both ends (Fig. 34). The diameter of the cylindrical portions was 2 in. (5.08 cm) and each stanchion had a maximum length of 2 ft. 11 in. (88.9 cm) from the underside of the cap to the top of the toe rail. The two forward-most stanchions were completely seated, but the after two were partially separated from the rail. The upper portion of the after port stanchion was still secured to the cap rail, but free of the toe rail. The reverse held true for the after most starboard stanchion, which was secured to the toe rail, but loose from the cap rail.



Figure 32: Cap rail and breasthook. (J. Papes, 2007)

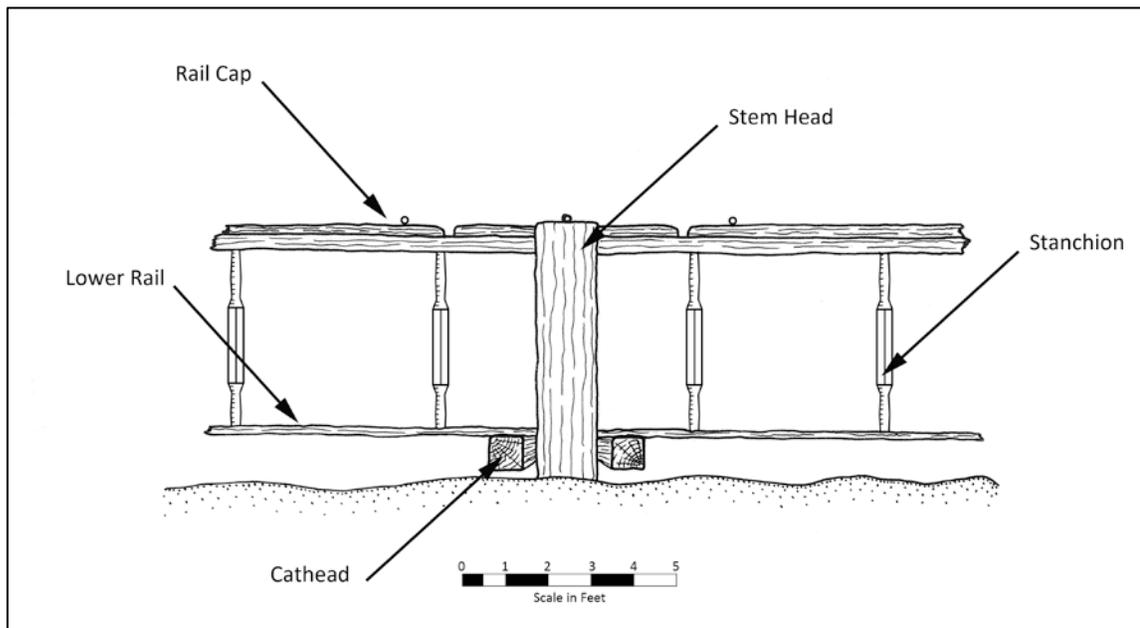


Figure 33: Front view of bow section.



Figure 34: Starboard rail stanchion. (J. Papes, 2007)

Lower Rail. The final component of the rail assembly was the lower toe rail (Fig. 35). The toe rail consisted of two timbers joined transversely and secured flush to the sides of the stem head. It was seated atop the catheads and deck beams, the fasteners of which were not observed due to poor visibility. The molded dimension of the toe rail was 2 in. (5.08 cm) and the sided dimension was 3 in. (7.62 cm). The length of the toe rail nearly coincided with that of the port and starboard cap rail, but was slightly longer on both sides.

Strengthening the toe rail on its inboard side was the first of two recorded deck beams. This beam abutted the after face of the stem and sat atop the catheads. The deck beam was 9 in. (22.86 cm) wide and 2 in. (5.08 cm) molded and diagonally cut at either

end to fit snugly against the rail. The upper face of the beam had an iron eye bolt in the middle. Also believed to be associated with the steamer's foremast stays, this eye bolt was slightly larger than the other three and had an outer and inner diameter of 3 in. (7.62 cm) and 2 in. (5.08 cm) respectively.

The second deck beam was smaller and located 1 ft. (30.48 cm) abaft the first. Also sitting atop the catheads, this beam measured 2 in. (5.08 cm) square and was also cut diagonally at its ends. Fasteners were not observed on this timber, but likely occur vertically at the catheads and transversely into the toe rail.

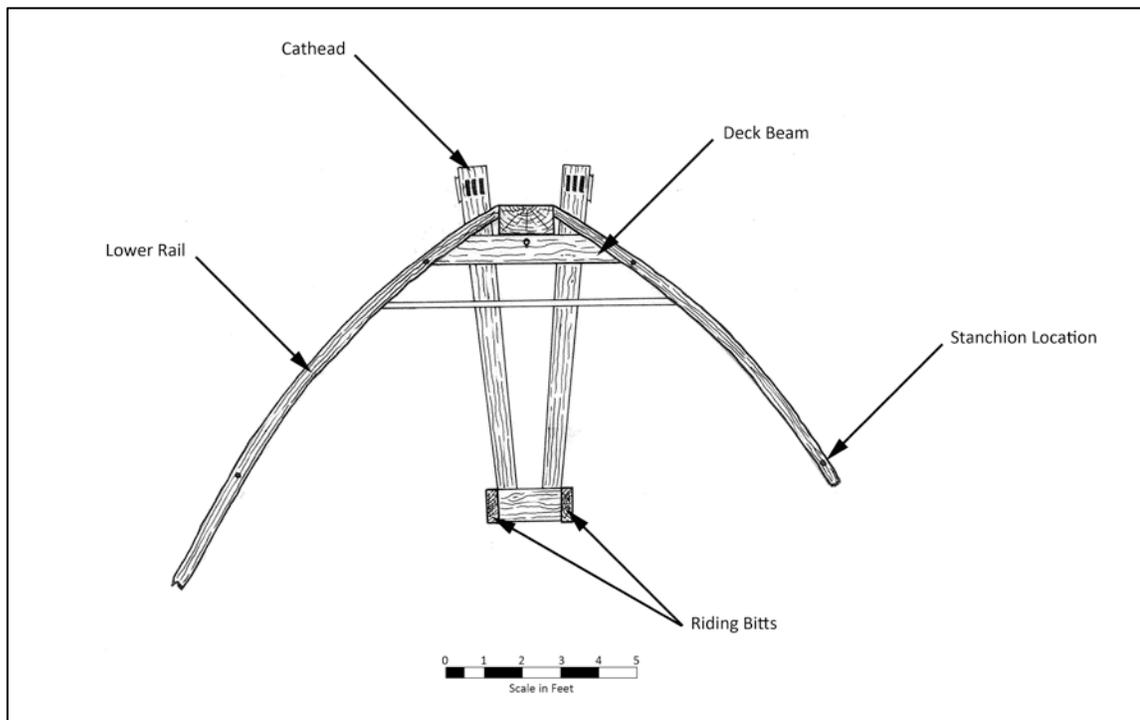


Figure 35: Detail of bow's lower rail.

Catheads. Two catheads were present and in remarkable shape (Figs. 36, 37). These timbers were used to raise and lower the steamer's two bow anchors, also present on site. The overall length of the catheads was 9 ft. 4 in. (2.85 m), of which 1 ft. 9 in. (53.34 cm) extended outboard from the side of the boat. The catheads were thicker at their forward end, measuring 9 in. (22.86 cm) square, and continuously tapered down the length of the timber to 9 in. (22.86 cm) molded by 6.5 in. (16.51 cm) sided at their after ends. The two timbers were seated between and terminated at the two riding bitts. The forward (outboard) ends of the catheads each had three rectangular slots, 9 in. (22.86 cm) long by 1.5 in. (3.81 cm) wide, which housed internal sheaves. The sheaves themselves were not examined due to inaccessibility.

On the outer side of each cathead was a heart-shaped cleat. The cleats, used in hauling operations associated with the anchors or rigging, measured 16 in. (40.64 cm) long, had a maximum width of 9 in. (22.86 cm), and were 1.5 in. (3.81 cm) thick. The cleats were mounted to the catheads approximately an inch off center below the centerline and secured with three 1 in. (2.54 cm) headed iron fasteners in a triangular formation. The edge along the cleats is slightly grooved to receive cable.



Figure 36: Port cathead with heart-shaped cleat. (J. Papes, 2007)



Figure 37: Profile of port cathead. (J. Papes, 2007)

Riding Bitts. The interior ends of the catheads are fitted in between two riding bitts (Fig. 38). These bitts were the tallest feature of the bow, rising 6 ft. 8 in. (2.03 m) above the lake bottom. The bitts measured 9.5 in. (24.13 cm) wide by 2.5 in. (6.35 cm) thick and were separated by a distance of 1 ft. 5 in. (43.18 cm). A small bracing timber, 1 ft. 5 in. (43.18 cm) long by 9 in. (22.86 cm) wide by 3 in. (7.62 cm) thick, was found between the bitts resting atop the cathead timbers. Fasteners were not observed on this bracing timber, but were likely driven in from the outer face of the riding bitts to provide

strength for the catheads. Conditions on site did not allow for the underside of this arrangement to be examined, as the lower face of the catheads was just above the mud.



Figure 38: Riding bitts and catheads. (J. Papes, 2007)

Anchors. The steamer's two bower anchors were present on site, but mostly encapsulated in mud. Both the port and starboard anchors were found besides their respective catheads, with only a small portion of the wooden anchor stocks exposed (Figs. 39, 40). Each stock was composed of two halves held together by iron bands. These composite stocks were circular in section and tapered toward the end. At the

middle of the stock was the top of the anchor's iron shank, which held an iron ring for the anchor cable (no longer present). Time did not allow for more than a cursory examination of the anchors.

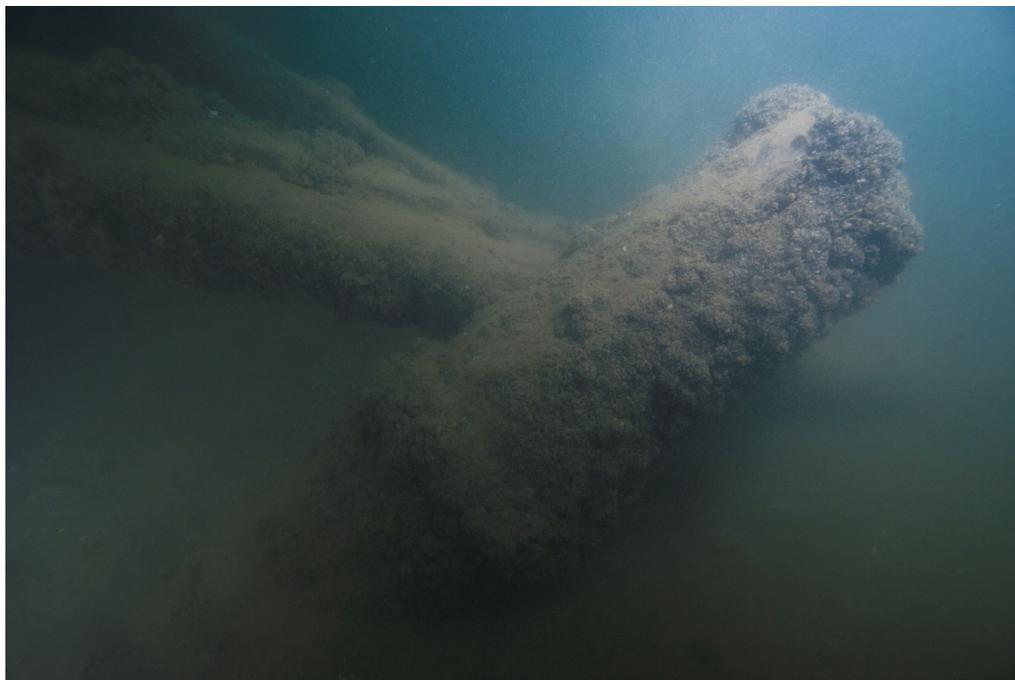


Figure 39: Port anchor stock. (A. Morrison, 2008)



Figure 40: Starboard anchor stock. (J. Papes, 2007)

Hogging Truss

A portion of *Anthony Wayne*'s hogging truss system survived on the wreck in the area around the drive shaft. The problem of hogging, or sagging at both ends of a vessel, was a phenomenon endured by large wooden ships for centuries. Great Lakes shipbuilders dealt with this problem in their side-wheel steamers by integrating a wooden truss system into the vessel's hull to strengthen the ends. Hall describes the truss system as being constructed "out of long, straight beams, united with iron rods, and giving it the angular appears of a bridge-truss."⁴⁸⁶ Over time, this angular composite

⁴⁸⁶ Hall 1970, 168.

truss underwent modification and evolved into a stronger bow or arch shape, earning it the name “Bishop arch.”⁴⁸⁷

The exact date when hogging truss systems made their way to the Great Lakes is not presently known. Hogging trusses were used on Lake Champlain and the Hudson River during the 1830s, but are missing from depictions of Great Lakes steamers during the same time.⁴⁸⁸ The harsh weather and rapid wave action on the Lakes necessitated some type of reinforcement and its absence in iconography should not imply these systems did not exist. It is possible that trusses were internalized, obscured from view by the paddlewheel boxes, or not used in favor of an alternative.⁴⁸⁹ Internalized hogging trusses are nothing new to the maritime world and can be seen on archaeological examples of sailing canal schooners of Lake Champlain.⁴⁹⁰ The remains of *Anthony Wayne* advocate for the former, however, as its hogging truss is clearly above the main deck, but would have been completely masked by, and likely incorporated into, the paddlewheel boxes and superstructure. The earliest image of a steamboat exhibiting a more recognizable external truss is the 1843 propeller *Hercules* (Fig. 41).⁴⁹¹ Afterward this time angular and arch shaped hogging trusses became a common feature on Great Lakes steamboats.

⁴⁸⁷ Hall 1970, 168; Robinson 1999, 199.

⁴⁸⁸ Robinson 1999, 199.

⁴⁸⁹ Some early steamboats utilized robust riders or stringers to longitudinally strengthen the hull in place of a hogging truss, as evidenced in the western river steamboat *Heroine*.

⁴⁹⁰ Cozzi 2000, 173-4.

⁴⁹¹ Labadie 2009 (personal communication).

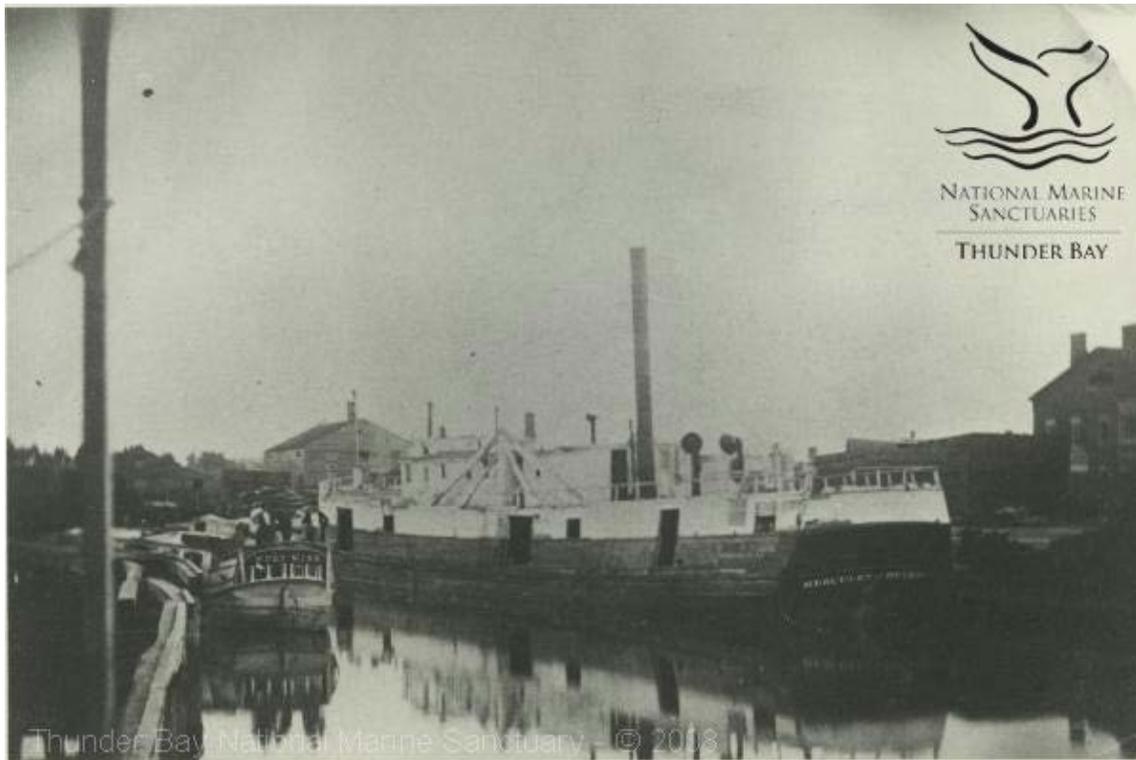


Figure 41: Propeller *Hercules* with external hogging truss. (Courtesy of Thunder Bay National Marine Sanctuary Collection)

Steamboats of the western rivers tackled the issue of hogging in a different way. Initially hulls were strengthened by a series of longitudinal stringers or sister-keelsons, such as the case with the 1830s steamboat *Heroine*, but these became inadequate as steamers increased in length. In the 1840s, long wrought iron rods tightened with turnbuckles known as “hog chains” were introduced to perform the same job as the heavier trusses in other regional steamboats. Hog chains were lighter and less cumbersome than composite trusses and were quickly adopted by shipbuilders.⁴⁹²

⁴⁹² Hunter 1977, 97-9.

On *Anthony Wayne*, each truss was made up of two primary components, a vertical hog post and a series of angled longitudinal timbers. The hog posts were situated 6 ft. 10 in. (2.08 m) forward of the drive shaft, while the truss timbers extended diagonally down fore and aft of each post. The diagonal timbers forward of the hog post sloped down at a 96° angle, while the aft diagonals ran down at a 102° angle. Both trusses plunged into the mud and the terminus points were not determined for either of them. The truss timber abaft the hog post ran beneath the paddle shaft with approximately 1 ft. (30.48 cm) clearance.

Missing from the site were traces of the iron hardware that may have also comprised a portion of the hogging truss system. These components usually included iron rods, turnbuckles, and chain links used to increase the rigidity of the hull. It is unknown if *Anthony Wayne* was equipped with such hardware, as these elements were absent from observable material, but they may possibly remain buried on site.

Port Truss. The port hogging post was composed of two vertical timbers fastened face to face (Fig. 42). The outboard timber was the larger of the two and measured 2 ft. 8 in. (81.28 cm) wide by 5 in. (12.7 cm) thick. The post extended 2 ft. 7.5 in. (80.01 cm) above the diagonal truss timbers, but its overall height is unknown. The outboard timber had rectangular notches cut into the two upper corners, the forward notch was heavily worn and damaged; the purpose of these notches is not presently known. These notches measured approximately 6 in. (15.24 cm) long by 3.5 in. (8.89 cm) wide. The inboard timber of the hogging post was 1 ft. 1 in. (33.02 cm) wide by 4.5 in. (11.43 cm) thick and extended 1 ft. 11 in. (58.42 cm) above the truss timbers. The

inboard timber was not centered on its outboard counterpart, but instead has its after face aligned with the after notch located above.

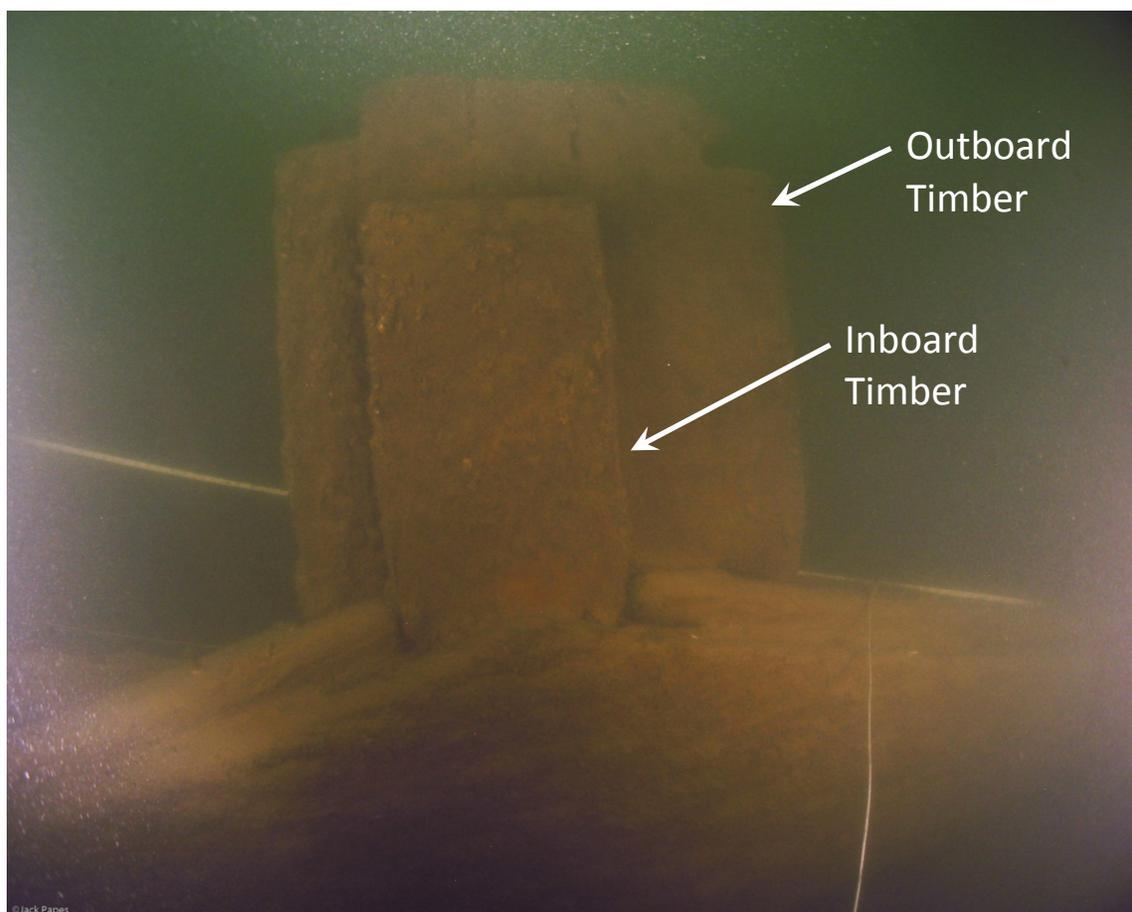


Figure 42: The inboard face of the port hogging post. (J. Papes, 2007)

Three longitudinal timbers composed the diagonal elements of the truss, with two timbers running fore and aft of the hog post and one shorter timber overlapping the two on the inboard side (Fig. 43). The forward diagonal timber measured 1 ft. 6 in. (45.72 cm) molded at the hog post and 1 ft. 1 in. (33.02 cm) sided. This timber was split down its length and had the appearance of being assembled from two separate pieces. It

originated at the forward face of the hog post and had a total observed length, including what was exposed during excavation, of 22 ft. 9 in. (6.93 m). Its terminus was not determined, however, as the truss continued beyond the maximum depth of the test unit.

The after diagonal timber was smaller than its forward counterpart, being 7.5 in. (19.05 cm) sided and 1 ft. 6 in. (45.72 cm) molded. It originated at the after face of the hog post and had a total observed length of 16 ft. (4.88 m). Again, this is not the full length of the diagonal truss, as the timber continued downward beneath the drive shaft and into the lake bottom.

The inboard truss timber was composed of a single piece of wood and fastened to both outboard diagonals as well as the hogging post itself. The inboard timber was situated 2.5 in. (6.35 cm) down from the upper face of the diagonal timbers and had an overall length of 11 ft. 7.5 in. (3.54 m). This timber was 3 in. (7.62 cm) sided, had its greatest molded dimensions at the center of the hogging post, 1 ft. 3 in. (38.1 cm), and tapered to 4.5 in. (11.43 cm) at its ends.

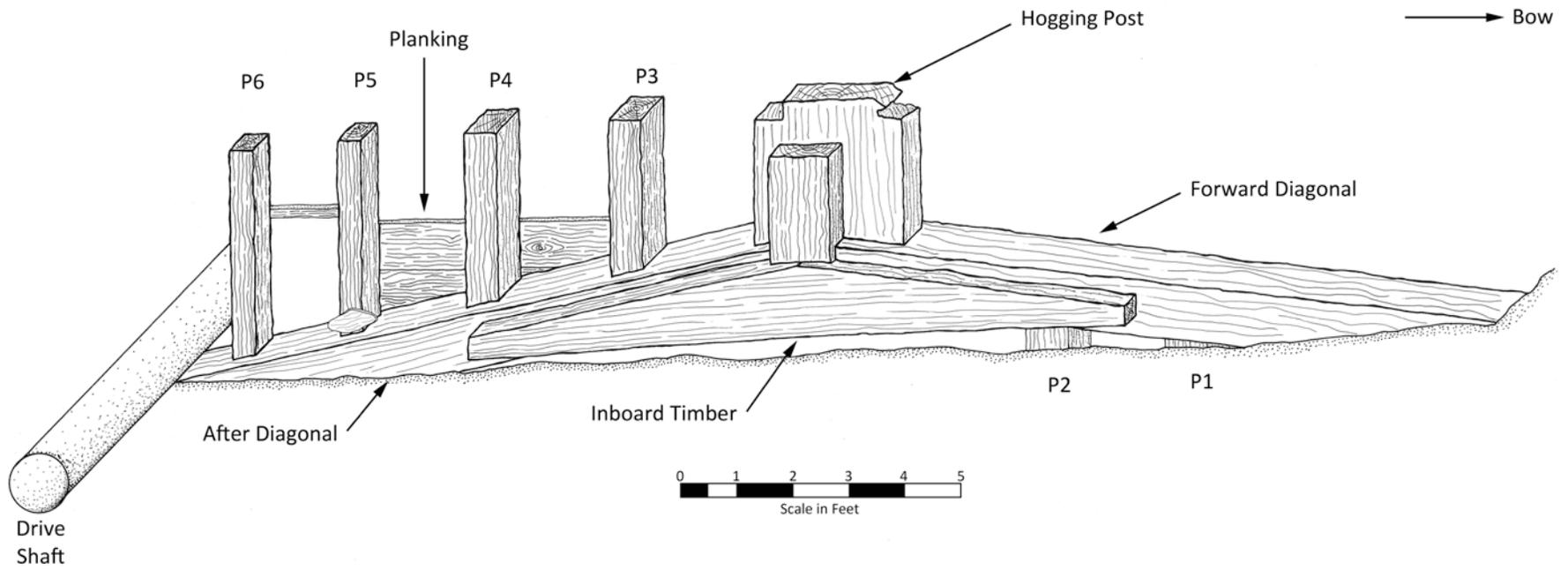


Figure 43: Detail of port hogging truss.

Starboard Truss. The starboard hogging truss assembly was similar to the port side with a few minor differences. The hogging post was also composed of two vertical timbers, a larger outboard timber and a smaller inboard one (Fig. 44). The outboard timber measured 2 ft. 5 in. (73.66 cm) wide by 5 in. (12.70 cm) thick and extended 2 ft. 6 in. (76.20 cm) above the truss timbers (its total height is presently unknown). There was a rectangular notch on the upper forward corner of the post that measured 4 in. (10.16 cm) long by 6 in. (15.24 cm) tall. As with the port side, it is unclear what function this notch served. The hogging post's inboard timber was aligned flush with the after edge of the outboard post, and measured 1 ft. 2 in. (35.56 cm) wide, 5 in. (12.70 cm) thick, and extended 1 ft. 10 in. (55.88 cm) above the diagonal timbers.

The starboard longitudinal truss timbers mirrored the arrangement on the opposite side, with two diagonal timbers running fore and aft of the hog post and one inboard timber overlapping the diagonals. The forward diagonal timber measured 1 ft. (30.48 cm) sided by 1 ft. 6 in. (45.72 cm) molded and had a total length of 12 ft. 1 in. (3.68 m) before plunging into the lake bottom. An interesting feature associated with this timber was a transverse beam notched over the truss found 10 ft. (3.05 m) forward of the hogging post. This beam measured 3.5 in. (8.89 cm) molded by 1.5 in. (3.81 cm) sided and had a total exposed length of 7 ft. 4 in. (2.24 m). Both ends of the timber were buried and therefore a total length could not be determined. The function of the beam remains a mystery, as its too small to provide structural support for either the paddlewheel box or the superstructure.

The after diagonal truss timber was smaller than its forward counterpart, as its greatest sided and molded dimensions were 8 in. (20.32 cm) and 1 ft. 6 in. (45.72 cm) respectively. The after timber passed underneath the starboard drive shaft, and had a total observed length of 14 ft. 0.5 in. (4.28 m). Its molded dimension lessened to 7.5 in. (19.05 cm) before it went into the mud. A 3.5 in. (8.89 cm) wide notch was cut into the upper and inboard faces of the timber abaft of the drive shaft. This notch probably was a mortise for timbers meant to support the superstructure. The notch on the upper face measured 0.75 in. (1.91 cm) deep, while the notch on the inner face measured 1.5 in. (3.81 cm) deep.

The inboard truss timber overlapped both diagonal timbers and the starboard hogging post. It rested approximately 3 in (7.62 cm) below the upper face of the diagonal timbers and measured 3 in. (7.62 cm) sided by 11 ft. 7 in. (3.53 m) long. The molded dimension of the timber was 1 ft. 3 in. (38.10 cm) at the hogging post, which tapered down to 4.5 in. (11.43 cm) at either extremity.

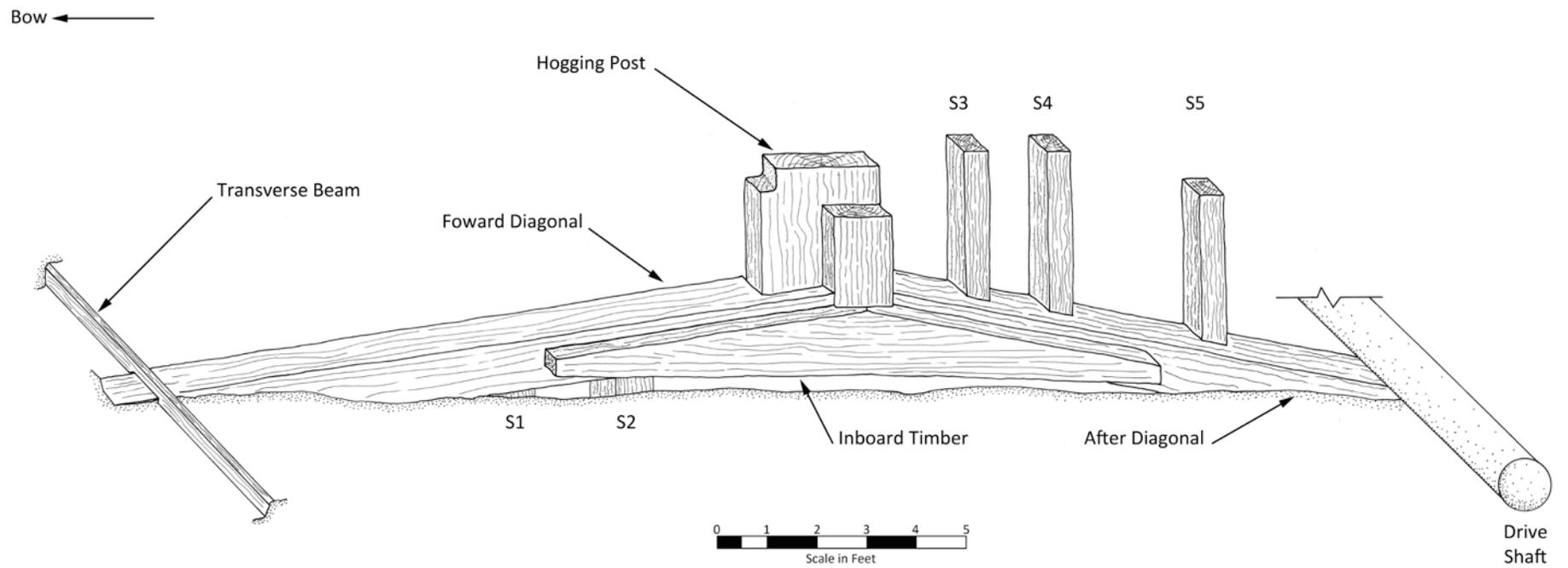


Figure 44: Detail of starboard hogging truss.

Truss Frames and Planking. Several truss frames were fastened to diagonal truss timbers on both the port and starboard side of the vessel. Frames were visible both forward and aft of the hogging posts; the forward frames were situated beneath the truss timber, while the after frames extended above the diagonals.⁴⁹³ These framing elements gave support to the hogging truss and secured the large timbers into the hull itself, although it is not clear how, given the buried nature of the wreck. The frames and the hogging posts likely served a dual role in providing some the basic components for the steamer's paddlewheel boxes which would have encapsulated the entire wheel assembly. The observed frames were each comprised a single timber, and no joints, scarfs or companion pieces were observed. Each frame received an alphanumeric designation, denoting either port or starboard with the forward-most visible frame beginning the numbering sequence (e.g. the forward-most frame on port is P1).

On the port side, frames P1 and P2 were located forward of the hog post and situated beneath the truss timber (supra Fig. 43). Frame P2 was 2 ft. 2 in. (66.04 cm) forward of the hog post, while P1 was 4 ft. 8 in. (1.42 m) from the same mark. Both P1 and P2 were molded and sided 9 in. (22.86 cm), and set back 3 in. (7.62 cm) from the inner face of the truss timber. Four frames, P3 through P6, were found between the hog post and the drive shaft. Frame spacing, on average, was 2 ft. (60.96 cm), but gradually decreased as one moved farther away from the hog post. The molded and sided dimensions for the four frames varied, but ranged between 5 in. (12.70 cm) and 7 in.

⁴⁹³ There is a notch cut into both the port and starboard forward truss timbers, indicating the presence of frames immediately forward of the hog post. These timbers no longer exist and no other notches were observed.

(17.78 cm) (Table 10). All of the frames had their upper ends cut flat and nearly matched the height of the hog post, which may represent the top of the side, or the sheer. Frame P3 had damage on its forward face just above the truss timber, the extent of which is 1 in. (2.54 cm) deep by approximately 6 in. (15.24 cm) high. Frame P5 had on its inner face a diamond-shaped wooden cleat just above the truss timber. The cleat measured 9 in. (22.86 cm) long by 4 in. (10.16 cm) wide and was approximately 1 in. (2.54 cm) thick. The cleat appeared too weak to secure any robust lines or cables, and the light wear exhibited indicated that it may not have been used much.

Two pieces of exterior planking were found on the port side attached to the truss frames (supra Fig. 43). The longest plank was situated between frames P3 and P5 at the level of the truss timber. It measured 4 ft. 10 in. (1.47 m) long by 9 in. (22.86 cm) wide by 1 in. (2.54 cm) thick. Directly above this plank, between frames P4 and P5, was a second plank. This piece measured 2 ft. 3.5 in. (69.85 cm) long by 10 in. (25.40 cm) wide by 1 in. (2.54 cm) thick. In addition to the planking, there was an isolated bracing timber located between frames P5 and P6. The brace was 2 ft. 1 in. (63.50 cm) above the truss timber, and measured 1 ft. 10 in. (55.88 cm) long by 2 in. (5.08 cm) tall by 1.5 in. (3.81 cm) wide. The planks and the brace were all attached to the frames directly with small iron nails, the heads of which measured 0.25 in. (0.64 cm) square.

Table 10: Port frame scantlings.

Frame	Molded (in.)	Sided (in.)	Height (above truss; ft)	Notes
P1	9	9	-	-
P2	9	9	-	-
P3	7	7	2.67	Damage at base
P4	5	6	3	-
P5	5	5	3.42	Cleat on inner face
P6	5	5	3.67	-

The framing arrangement on the starboard truss was similar to that of the port side. Frames S1 and S2 were forward of the hog post beneath the truss timber and barely exposed (supra Fig. 44). Frame S2 was located 2 ft. 2 in. (66.04 cm) from the hog post, while S1 was 4 ft. 11 in. (1.50 m) from the same mark. Both frames were molded and sided 8 in. (20.32 cm) and spaced 2 ft. (60.96 cm) apart. Three frames, S3 through S5, were found between the drive shaft and the hog post. Frame spacing here was more irregular, and ranged from 1 ft. 2 in. (35.56 cm) to 2 ft. 7 in. (78.84 cm). The molded and sided dimensions for the three frames varied between 5 in. (12.70 cm) and 6 in. (15.24 cm) (Table 11). The ends of the frames were all cut flat and nearly matched the height of the hog post. No planking or other features were attached to the starboard frames.

Table 11: Starboard frame scantlings.

Frame	Molded (in.)	Sided (in.)	Height (above truss; ft.)	Notes
S1	8	8	-	-
S2	8	8	-	-
S3	6	6	2	-
S4	6	6	3.25	Tapers to 5 in. square
S5	6	6	2.92	-

Machinery Details

Paddlewheels

During the 1830s and 1840s, Great Lakes steamboats were primarily propelled by two large paddlewheels on the sides of the vessel (Fig. 45).⁴⁹⁴ While paddlewheels were effective and widespread throughout the region, the advent of the stern-mounted propeller revolutionized the maritime transportation industry. Propellers were first introduced on Lake Erie in 1841 and proved to be more efficient, capacious, and seaworthy than side-wheelers.⁴⁹⁵ Ten years later, the number of vessels built with propeller eclipsed paddlewheels for the first time, but that did not render the technology completely obsolete. Side-wheel steamers continued to operate on the Great Lakes up to the end of the 19th century.

⁴⁹⁴ Musham 1957, 89.

⁴⁹⁵ Musham 1957.

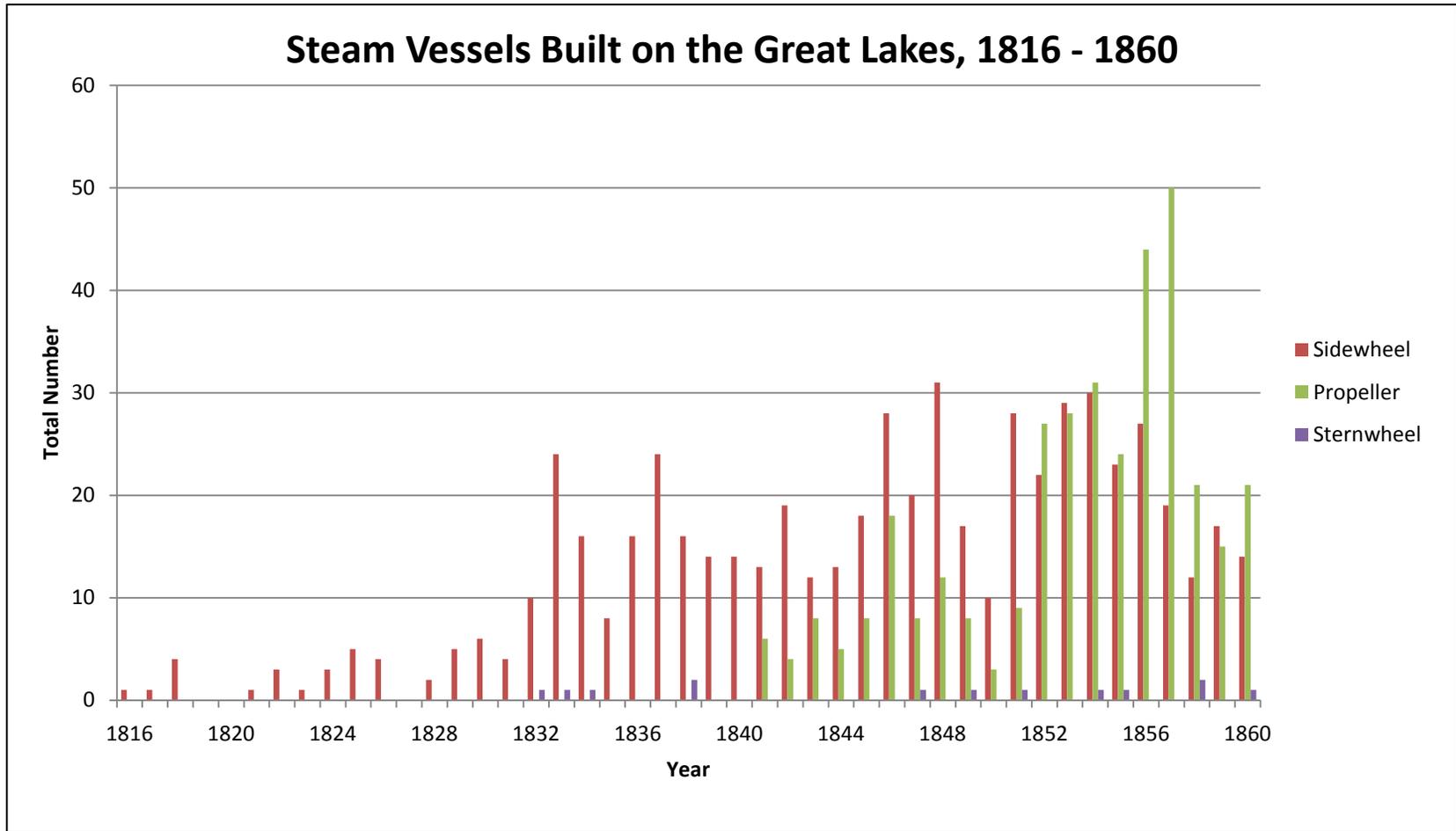


Figure 45: Great Lakes steamboats built per year by propulsion type.

On *Anthony Wayne*, the port and starboard paddlewheels were sitting upright on the lake bottom in a state of disrepair. Only the upper halves of the wheels were exposed, as the bottom portions were completely buried in mud. The wheels were radial in style and each comprised of three sets of arms seated into iron flanges mounted on the drive shaft. Most of the upper arms and buckets were considerably damaged, while the arms oriented forward and aft were much better preserved. The lower arms were inaccessible for study.

Three circular cast iron flanges (outboard, middle, and inboard) held the paddle arms in place. They were spaced 2 ft. 1.5 in. (64.77 cm) apart on the drive shaft (Fig. 46). The inboard flanges were 1 ft. 8 in. (50.80 cm) away from the outer face of the hogging truss timbers, while the outboard flanges were 1 ft. 8 in. (50.80 cm) away from the outboard drive shaft bearings. The flanges were mounted on the drive shaft with the arm pockets facing outboard. Each flange was 4 ft. 10 in. (1.47 m) in diameter by 5 in. (12.70 cm) thick, and had 20 arm pockets. The pockets were widest along the outer edge of the flange, 7 in. (17.78 cm) and tapered toward the center to 4 in. (10.16 cm) at the hub, and were 3 in. (7.62 cm) deep throughout. The flange hub was 1 ft.10 in. (55.88 cm) in diameter and had a 1 ft. (30.48 cm) hole to fit the drive shaft. The shape of the hole could not be discerned, although they were usually hexagonal to keep the flanges secured to the shaft. The mounting methods were also not observed.

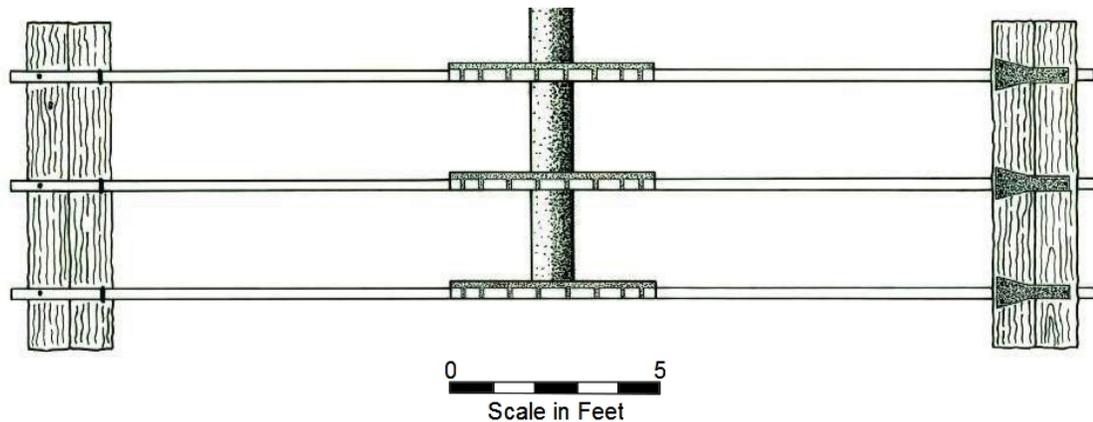


Figure 46: Port paddlewheel detail.

Several paddle arms survived in their entirety, while others were broken, missing, or inaccessible. Each arm originally measured 11 ft. 10.5 in. (3.62 m) long by 7 in. (17.78 cm) wide by 3 in. (7.62 cm) thick. The arms were fastened to the flanges by two iron bolts. Biofouling and corrosion prevented their dimensions from being captured, but the corresponding iron nuts measured 2.5 in. (6.35 cm) square. The port paddlewheel is slightly more complete than starboard, having 25 intact arms and 16 broken ones (19 inaccessible). By contrast, the starboard side has 22 intact and 20 broken arms (18 inaccessible). The damaged arms were typically broken off at the outer edge of the flange or just beyond it, with lengths ranging from 3 in. (7.62 cm) to 2 ft. (60.96 cm) above the flange.

Attached to the ends of the paddle arms were the buckets, or paddles. The buckets consisted of two planks extending transversely across the three arms (Fig. 47). Each plank measured 7 ft. 9 in. (2.36 m) long by 11 in. (27.94 cm) wide by approximately 1 in. (2.54 cm) thick.

(2.54 cm) thick, and separated by a distance of 1 in. (2.54 cm). The buckets were attached to arms with two types of iron fasteners, through-bolts and U-bolts. The through-bolts, approximately 1 in. (2.54 cm) in diameter, were located 7 in. (17.78 cm) from the end of the arms on the upper bucket plank. The U-bolts had a similar diameter, but were located on the lower bucket plank. Square iron nuts secured the bolts to a dovetail-shaped iron plate located on the front, or entrance side, of the buckets. The plates measured 20 in. (50.80 cm) long by 0.5 in. (1.27 cm) thick, and had a minimum width of 4 in. (10.16 cm) and a maximum of 6 in. (15.24 cm).

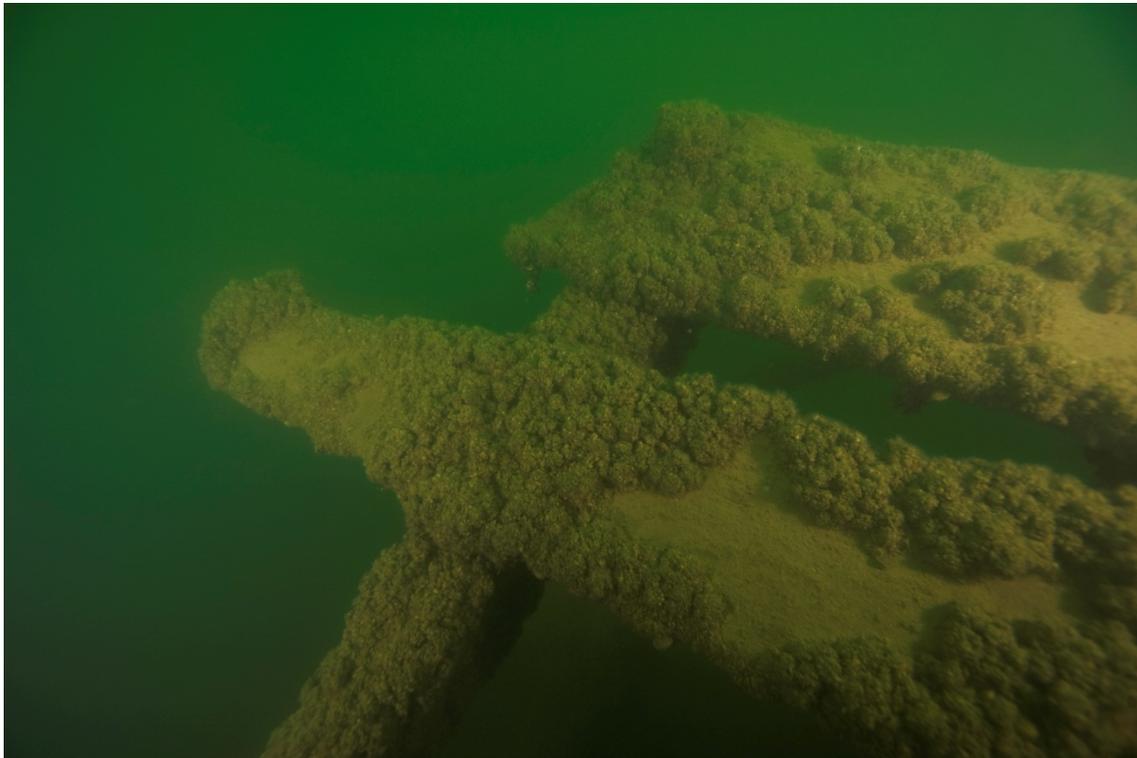


Figure 47: Port paddlewheel buckets. (A. Morrison, 2008)

Both paddlewheels were braced in two different ways to increase the strength of the wheel assemblies. The first method was with wooden cross braces between the arms 6 in. (15.24 cm) below the buckets. The braces were single timbers that measured 3 ft. 8 in. (1.07 m) in length by 3 in. (7.62 cm) wide. The observed braces were found between every other set of arms and fastened with iron nails. This alternating cross braces pattern appeared to represent the original construction scheme, although marine growth and biofouling made it difficult to say for certain.

The second strengthening method was the addition of two large iron reinforcing bands along the outer edge of the wheels. The bands were placed on both the inboard and outboard arm sets, between the end of the arms and the tops of the buckets. The bands had an overall exterior diameter of 24 ft. (7.62 m) and were 3 in. (7.62 cm) wide by 1 in. (2.54 cm) thick. All four bands were all damaged and disarticulated from the upper arms. The starboard bands bent down into the boat's interior and crossed the drive shaft (Fig. 48). It was not known whether the bands became separated from the wheels during the sinking event or if the damage was sustained later.

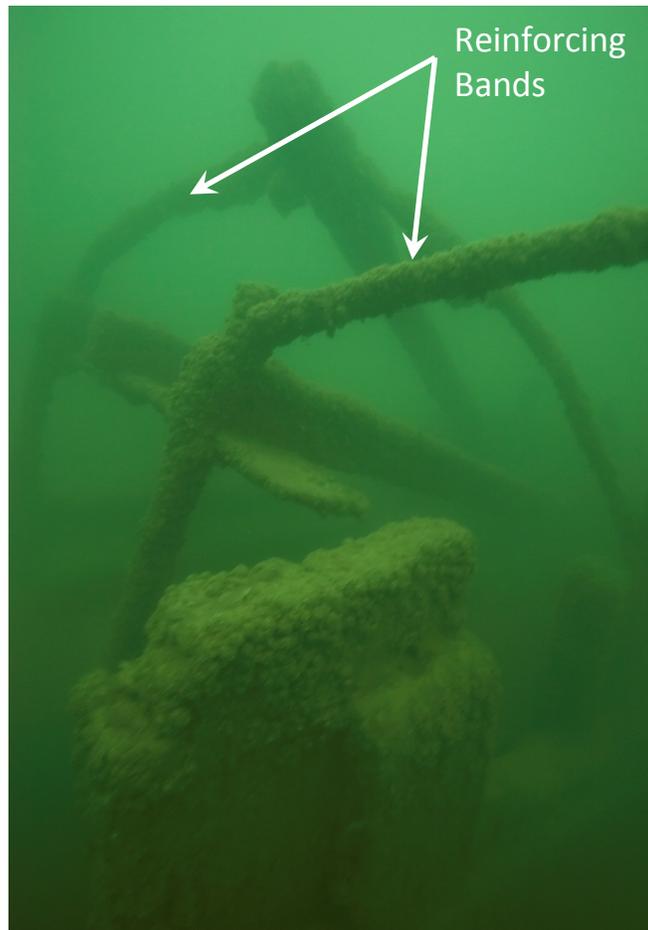


Figure 48: Starboard paddlewheel's reinforcing bands. (A. Morrison, 2008)

Main Shafts, Cams, and Cam Rods

Anthony Wayne's port and starboard paddlewheel main shafts were completely articulated to the paddlewheels, connecting rods, and the steam engine. These two shafts were the largest and most robust machinery components observed. The shafts are now situated approximately 1 ft. (30.48 cm) above the lake bottom; both exhibited corrosion, but otherwise were in sound shape. The average diameter of the shafts was 1 ft. (30.48 cm) over its length. The main shafts connected with the paddlewheel shafts by means of

a shaft coupling, which measured 2 ft. 2 in. (66.04 cm) in diameter and was 8 in. (20.32 cm) wide (Figs. 49, 50). The couplings, which were cast directly on the ends of each shaft, were fastened together with ten 3 in. (7.62 cm) square-headed bolts and 3 in. (7.62 cm) nuts. The total length of main shaft was approximately 10 ft. 9 in. (3.28 m), while the combined length of both the main and paddlewheels shafts, from the outboard bearings to the shaft cranks, was 21 ft. 3 in. (6.48 m).



Figure 49: Port shaft coupling. (A. Morrison, 2007)

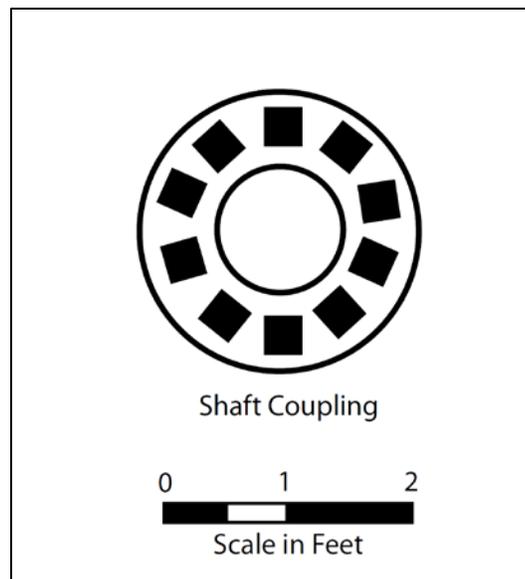


Figure 50: Shaft coupling detail

The main shafts were supported and incorporated structurally into the hull by four iron bearing, or bushing, blocks (Fig. 51). The bearing blocks were located at both ends of each shaft, two on the outboard ends and two inboard. All of the bearings shared a similar design consisting of a large rectangular base and a separate cap that fit around the shaft. The bases were firmly bolted to robust cylinder and support timbers while the cap was bolted through the base and into the timbers themselves. The outboard bearings were smaller than their inboard counterparts, as the caps measured 1 ft. 9 in. (53.34 cm) long by 9.5 in. (24.13 cm) wide. By contrast, the inboard bearings caps were 2 ft. (60.96 cm) long by 1 ft. (30.48 cm) wide. In both cases the bases were longer than the corresponding caps, but the lengths of these pieces were not recorded. Bearing sleeves, likely of brass, were fitted between each shaft and bearing block, but the survey team

was prevented from documenting them due to the tight fit of the pieces and the mussel infestation.

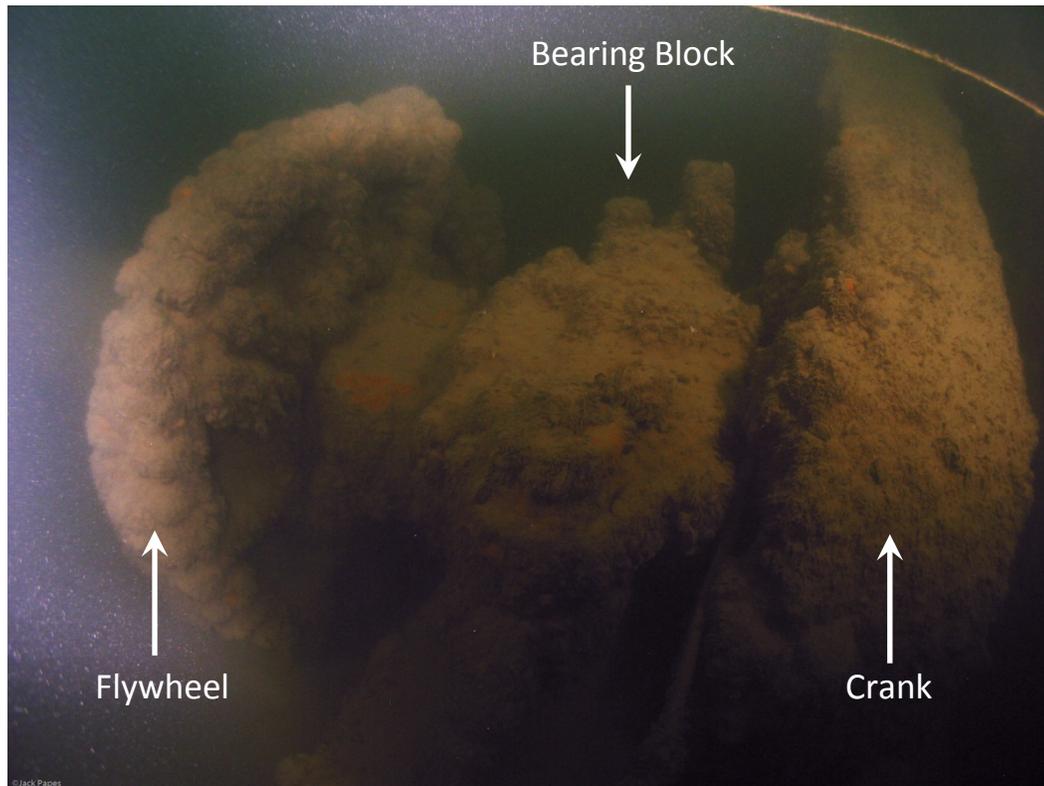


Figure 51: Port inboard bearing block between flywheel and crank. (J. Papes, 2007)

A small iron flywheel was attached to the port main shaft (supra Fig. 51). Flywheels minimized the jerking sensation of the engine by increasing the momentum of the rotating shafts, resulting in a much smoother ride. Flywheels were often large assemblies with flanges that connected the shafts directly to the pitman arm, but the arrangement on *Anthony Wayne* was slightly different. Instead of one or two large, centralized wheels, this steamboat had one small flywheel located 6 in. (15.24 cm) from

the inboard port bearing block. This flywheel was 2 ft. 8 in. (81.28 cm) in diameter and 6 in. (15.24 cm) wide (Fig. 52). Eight trapezoidal holes were evenly spaced around the entire flywheel; the upper edge of the trapezoid measured 7 in. (17.78 cm), the bottom 3.5 in. (8.89 cm), and the sides 3 in. (7.62 cm). The purpose of this flywheel is perplexing as it has no direct counterpart on the starboard side, although it possibly served to counterbalance the two starboard cams. The cams may have added drag to the starboard main shaft, which then rotated at a different speed than the port side. The presence of an additional port flywheel would mitigate the difference in rotation rates and allow for a better balanced system. Given its close proximity to the feed-water pump, it is possible that this piece is instead an actuator that operated either a valve or pump, but a lack of connecting rods and other associated components makes this a less likely scenario.

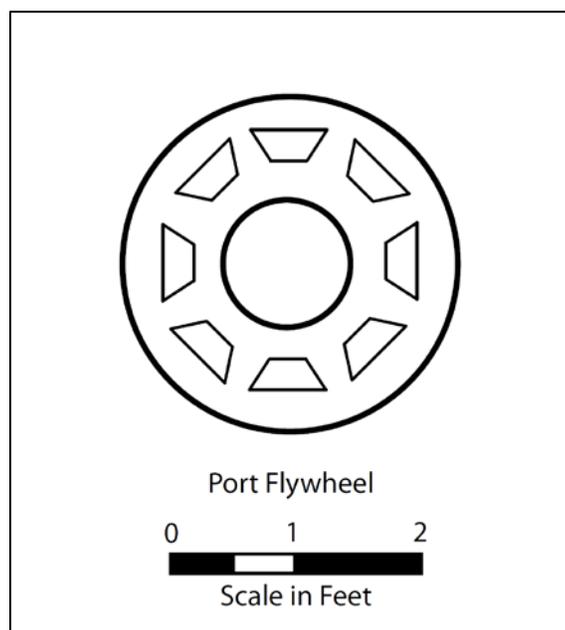


Figure 52: Flywheel detail.

Another feature commonly found on main shafts was the cams. These eccentric discs regulated the timing of the engine's poppet valves by converting rotary motion into reciprocal motion.⁴⁹⁶ As the cam rotated on the main shaft, its surrounding frame would shuffle back and forth, moving a longitudinal connecting rod that attached to a valve lever on the engine. The size and shape of a cam determined when the valves would open and close, with two of the most popular types being full-stroke cam and the cutoff cam (Fig. 53). As described by Hunter, "The *full-stroke* cam was employed when the steamboat was getting under way or backing and whenever maximum power was demanded. The *cutoff* cam was used under ordinary conditions when the most economical application of steam was desired."⁴⁹⁷ This type of cam-valve system was widely popular from the 1830s through the 1850s, especially in western river steamboats, as it provided engines the versatility needed for dealing with various circumstances and environments, as well as being more conservative with both energy output and fuel consumption.

⁴⁹⁶ Hunter 1993, 147-8; Kane 2004, 121-2.

⁴⁹⁷ Hunter 1993, 150.

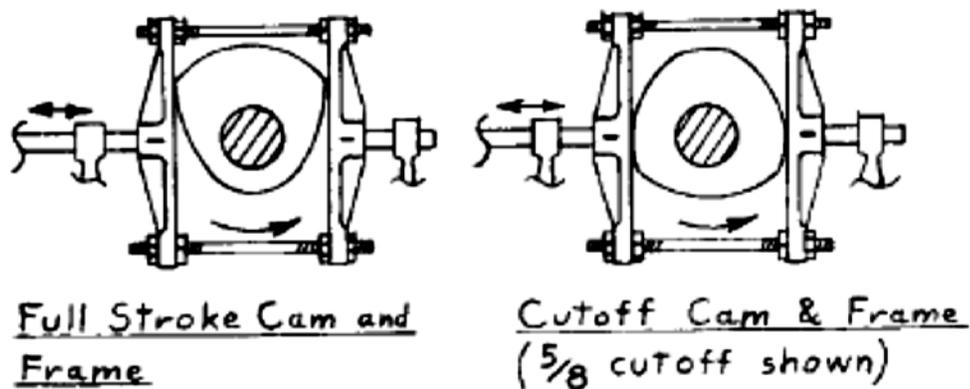


Figure 53: Diagram of full-stroke and cutoff cams. (Sawyer 1978, 78)

On *Anthony Wayne*, two cams, a full-stroke and a cutoff, and their frames were found completely intact on the starboard drive shaft (Fig. 54). The full-stroke cam was located 1 ft. 6 in. (45.72 cm) from the starboard crank and the cutoff cam sat beside it, 3 in. (7.62 cm) further outboard. The cams were still mounted on the drive shaft and their bottom halves were completely buried in mud. This made it difficult to record specifics, but enough of the cams were exposed to distinguish between the two types of cams.

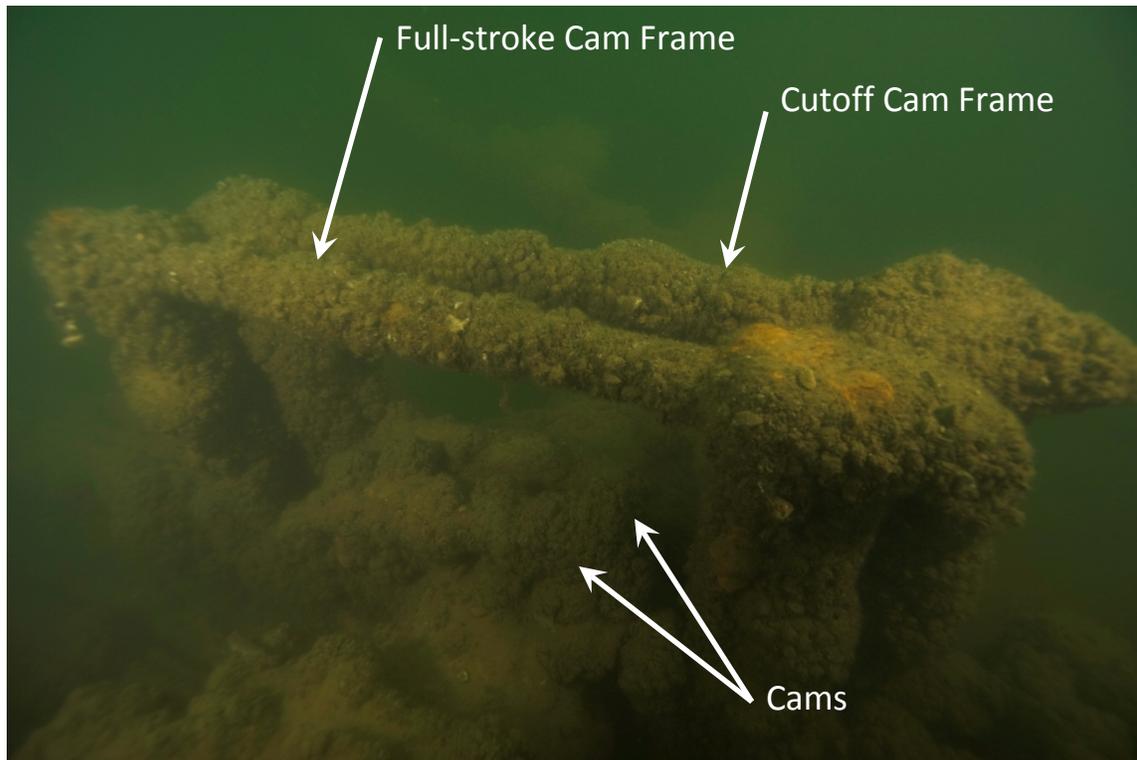


Figure 54: Cams and cam frames on the starboard drive shaft. (A. Morrison, 2008)

The iron frames, also known as yokes, surrounding the cams were identical to one another in terms of their shape and size. The upper portions of the frames were cylindrical shape, measuring 2 in. (5.08 cm) in diameter by 3 ft. (91.44 cm) in length. At the ends of this piece were larger cylindrical end caps that measured 5 in. (12.70 cm) long by 3.5 in. (8.89 cm) in diameter. The caps secured the frames' upper portion to the side frames via a 0.75 in. (1.91 cm) diameter bolt and 3 in. (7.62 cm) hexagonal nut. The sides of the frame were rectangular in section and measured 3.5 in. (8.89 cm) wide by 2 in. (5.08 cm) thick at the base of the end cap. The sides widened to 4 in. (10.16 cm) towards their middle at the point where the cam rods were located. The height of the side

pieces from the cam rods to the bottom of the end cap was 1 ft. 5 in. (43.18 cm), suggesting the total height of the frame was approximately 3 ft. 6 in. (1.07 m).

The cam rods, also known as reach rods or connecting rods, ran parallel to each other from the forward end of the cam frame to the valve lever on the engine. These wrought iron rods were 3 in. (7.62 cm) in diameter and held in place by at least two observable guide links, which were used to escort the cam rods to their intended locations (Fig. 55).⁴⁹⁸ The first guide link was located 9 in. (22.86 cm) forward of the cam yoke and the second 12 ft. 4 in. (3.76 m) forward of the same mark. The guides were identical and made of an upper and lower component, much like the bearing blocks, and in total measured 1 ft. (30.48 cm) long by 5 in. (12.70 cm) tall by 2.5 in. (6.35 cm) thick. Both rods were damaged approximately 20 ft. (6.10 m) forward of the cam yokes. The cutoff rod bent severely downward at this point, while the full-stroke cam rod twisted beneath the other rod and emerged at the engine's valve lever. The total length of the full-stroke cam rod was slightly less than 31 ft. (9.45 m). The forward end of the cam rod was hooked so that it could be placed upon the pins of the engine's starting lever. The hook measured 2 in. (5.08 cm) in diameter, and forward of that it tapered into a 5 in. (12.70 cm) long handle (Fig. 56).

⁴⁹⁸ Bates 1996, 5.

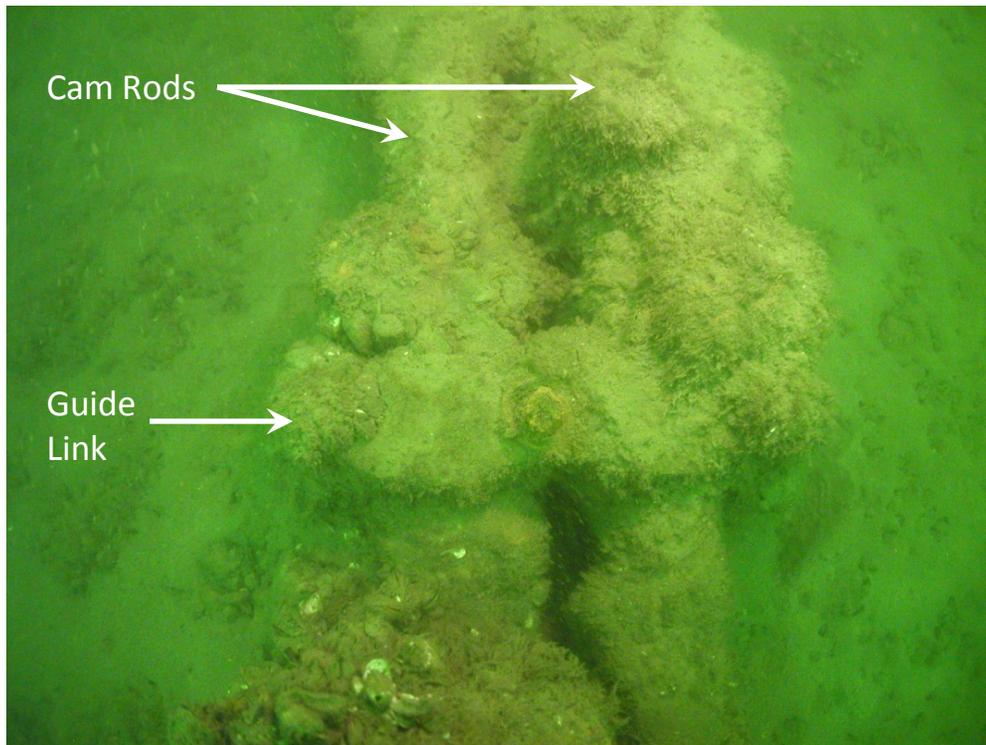


Figure 55: Cam rod guide link. (D. Van Zandt, 2009)

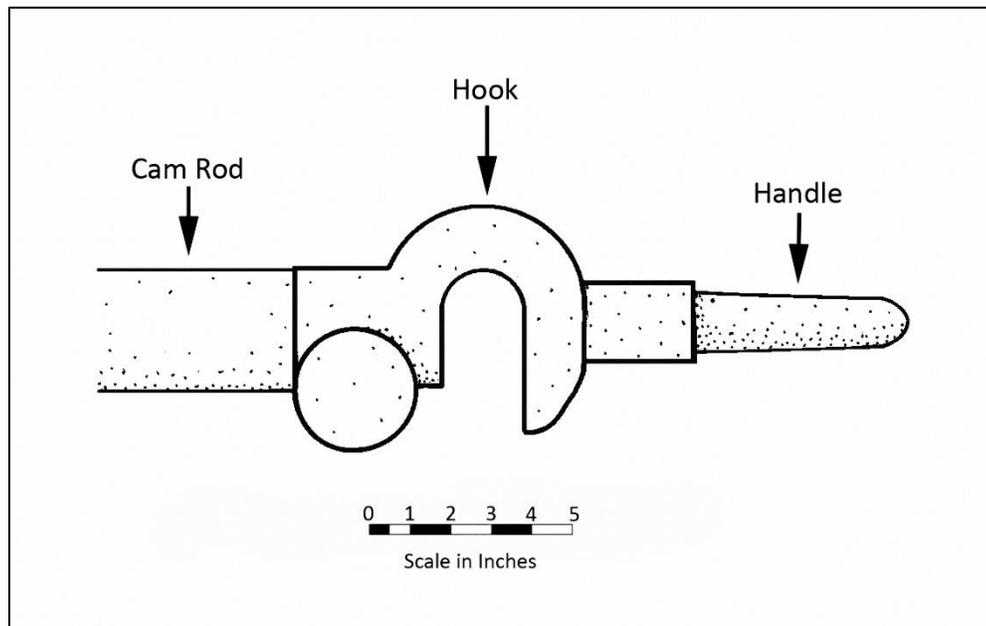


Figure 56: Cam rod end detail.

Pitman Arm, Cranks, and Crosshead

Anthony Wayne's large pitman arm extends down the wreck's centerline. The pitman was a large composite-material connecting rod that ran from the piston to the cranks and served as the means by which power from the engine was transferred to the main shafts. As the piston traveled back and forth, the pitman would rotate the cranks, drive shaft, and paddlewheels, thereby bringing the steamboat to life.

The pitman arm on *Anthony Wayne* was fully articulated and escaped any significant damage (Fig. 57). The after end of the pitman was above and slightly forward of the drive shaft, indicating that the engine stopped towards the end of the stroke cycle. The pitman measured 23 ft. 6 in. (7.16 m) long and was made of wood with iron straps along its top and bottom over the entire length (Fig. 58). The straps were 6 in. (15.24 cm) wide by 3 in. (7.62 cm) thick. The pitman was molded 1 ft. 5 in. (43.18 cm) at the center and tapered to 1 ft. (30.48 cm) at the ends. The sided dimension of the wooden portion also changed, as it was 6 in. (15.24 cm) at the center and tapered to 3.5 in. (8.89 cm) at the ends. The straps were secured to the wood with 18 through-bolts. The bolts were spaced closer toward the ends of the pitman and wider apart at the middle. The heads of the bolts were along the upper strap and measured 2 in. (5.08 cm) square. The pitman was attached to the crosshead linkage at its forward end and to the cranks aft with a pin or key with a fin-shaped head. The pin measured 7 in. (17.78 cm) long by 2 in. (5.08 cm) wide, and extended 7 in. (17.78 cm) above from the top of the upper strap.



Figure 57: *Anthony Wayne's* pitman arm and cranks. (J. Papes, 2007)

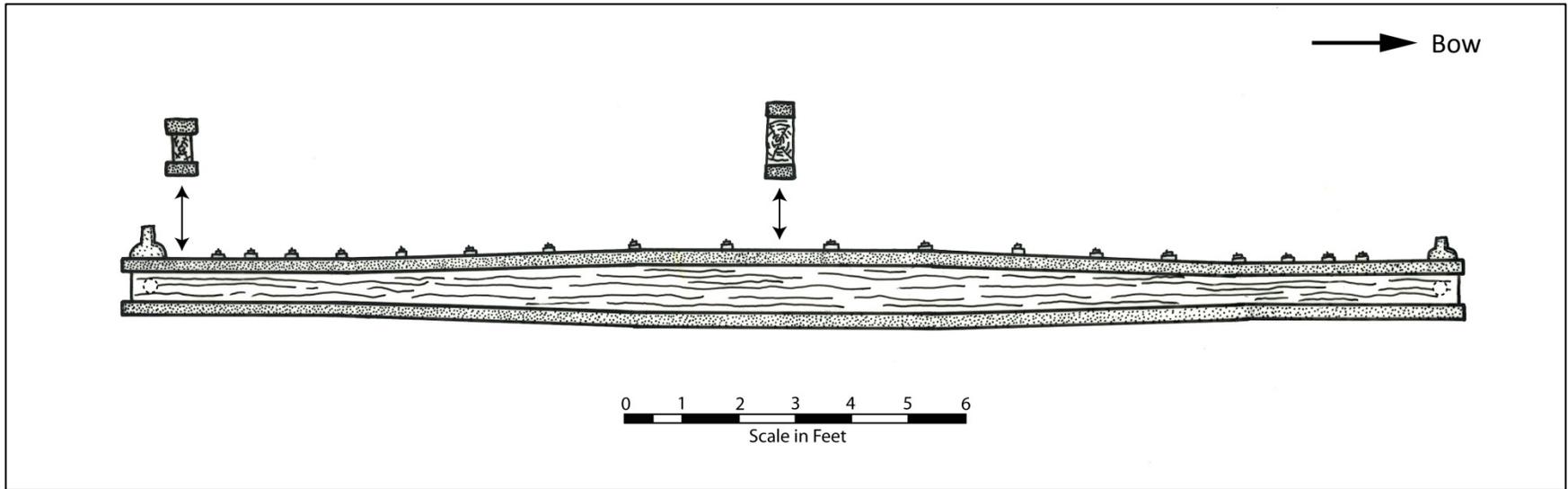


Figure 58: Detail of pitman arm.

Two heavy iron cranks joined the steamboat's pitman arm to the drive shafts. In conjunction with the pitman, the cranks converted the reciprocal motion of the piston into rotary motion and thus turned the paddlewheels.⁴⁹⁹ Given the tight quarters and biofouling in this area, it was difficult to inspect how the cranks were secured to the drive shafts. The cranks ranged between 4 ft. (1.22 m) and 4 ft. 6 in. (1.37 m) in length and were 7 in. (17.78 cm) thick. The cranks' width was greatest at the main shafts, approximately 2 ft. (60.96 cm), and tapered down to 1 ft. (30.48 cm) where they attached to the piston. The crank abutted the pitman arm directly on the starboard side and was secured via the crank pin. On the port side, however, there was a filler piece between the crank and pitman (Fig. 59). This appeared to be a rectangular block of iron 1 ft. 3 in. (38.10 cm) long by 5 in. (12.70 cm) wide. Its purpose was not immediately known, but it could have been an insert if the more substantial machinery components did not fit together.

⁴⁹⁹ Bates 1996, 4.

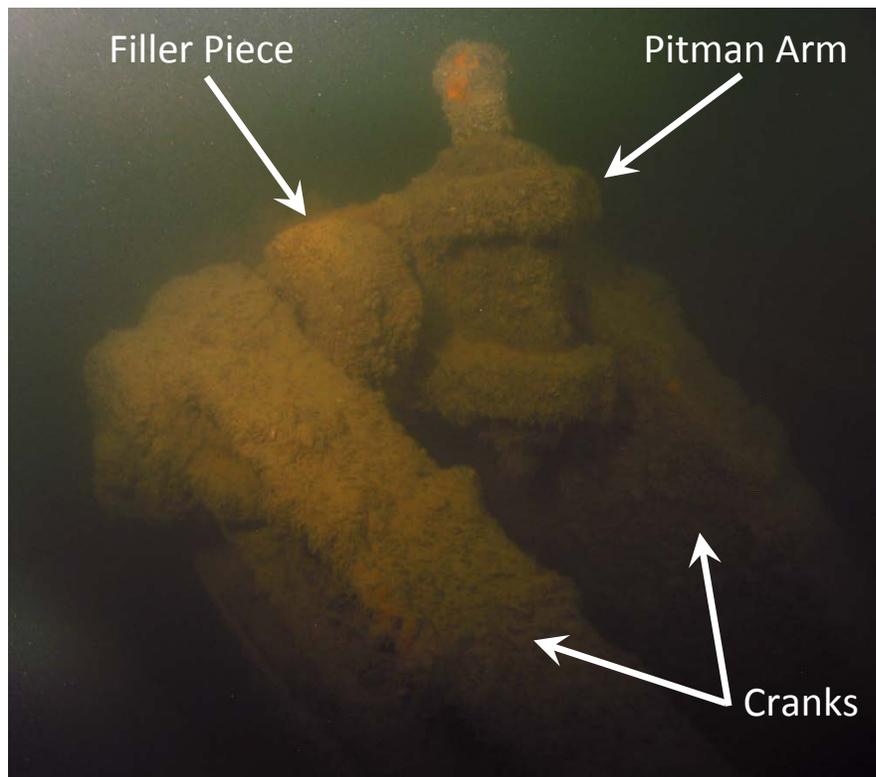


Figure 59: Cranks, pitman, and port side filler piece. (A. Morrison, 2008)

The forward end of the pitman was joined to the engine's piston by the crosshead linkage (Fig. 60). The crosshead was 'T'-shaped with a recess in the middle to receive the pitman arm (Fig. 61). Its overall length was 2 ft. 4 in. (71.12 cm) and contained 1 ft. 5 in. (43.18 cm) of the pitman arm. The crosshead was circular in section where it joined to the piston, 9 in. (22.86 cm) in diameter, and was fixed in place to the piston with a 5 in. (12.70 cm) by 4.5 in. (11.43 cm) by 2 in. (5.08 cm) key. The crosshead changed shape from circular to square before widening to its maximum width along its after face, 2 ft. 1 in. (63.5 cm). The 'T'-shaped protrusions, which slid along iron guide plates mounted onto the cylinder timbers, measured 8 in. (20.32 cm) by 5.5 in. (13.97 cm). The

overall height of the crosshead at its after end was not recorded as it was buried. The pitman was attached to the crosshead via a wrist pin that allows for rotary motion. While the pin itself was not observed due to the full articulation of the pieces, the key that holds it in place was evident and measured 8 in. (20.32 cm) long by 1.5 in. (3.81 cm) wide by 5.25 in. (13.34 cm).

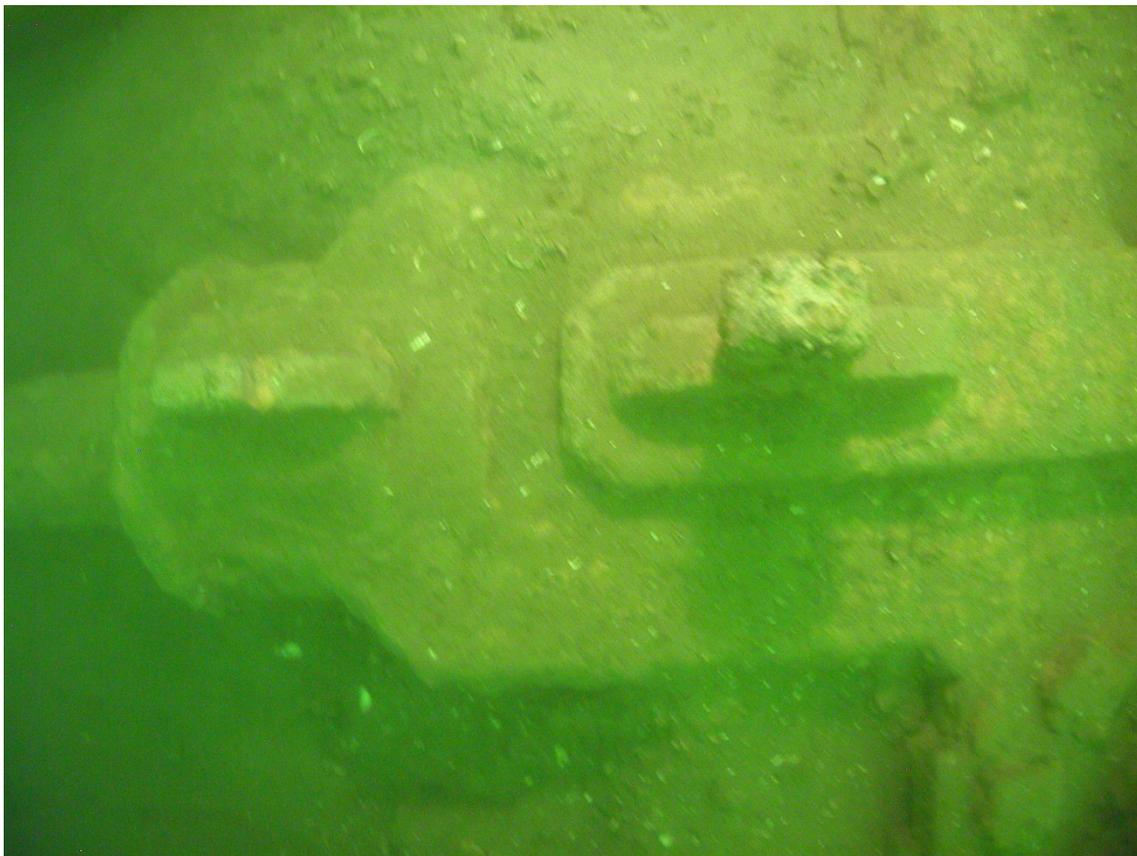


Figure 60: Crosshead linkage. (D. Van Zandt, 2009)

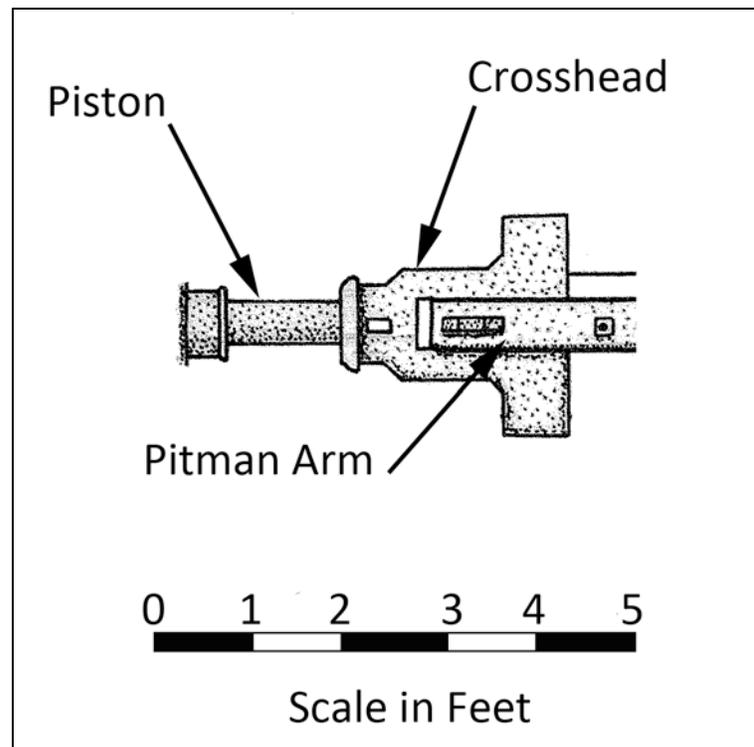


Figure 61: Crosshead detail.

The pitman arm and the cranks were both housed within the cylinder timbers, the elements of which were just barely visible protruding from the lake bottom. The cylinder timbers ran parallel to the vessel's centerline and provided structural support for the drive system by distributing its massive weight throughout the hull (Fig. 62). The sided dimension of the cylinder timbers was 11 in. (27.94 cm), but the molded dimension was not obtained, although it was determined to be greater than 2 ft. (60.96 cm). The timbers began 5 ft. 4 in. (1.63 m) abaft the main shafts and were observed extending to the forward end of the pitman arm (it was not uncovered forward of this location). Two cast iron guide plates were bolted atop the cylinder timbers and provided tracks for the

reciprocal motion of the crosshead and helped to keep it aligned. The plates were mounted 3 in. (7.62 cm) off center and were located 16 ft. 11 in. (5.16 m) forward of the main shafts. Each plate was approximately 7 ft. (2.13 m) long, 10 in. (25.40 cm) wide, and 2.5 in. (6.35 cm) thick. The plates were fastened to the timbers with 2 in. (5.08 cm) square iron bolts.

Engine

A review of historical documentation revealed that *Anthony Wayne* was powered by a horizontal direct-acting steam engine. Direct-acting engines, also known as high pressure engines, were highly popular in steamboats on the western rivers, while steamers on the east coast preferred to operate using low pressure, atmospheric engines. In the Great Lakes, however, there was a tendency in the mid-19th century to use both kinds of engine almost equally, with the balance tipping toward high-pressure engines after the advent of the screw propeller.⁵⁰⁰ While high pressure engines were originally installed in steamboats in a vertical fashion, after a few years these engines were mounted horizontally.⁵⁰¹ Direct-acting engines held two primary advantages over their low pressure counterparts, lower cost of manufacture and increased reserve power.⁵⁰² Despite public concerns that high-pressure engines were dangerous (as discussed in Chapter 4), this engine type enjoyed great popularity throughout the Great Lakes and elsewhere in the United States for the remainder of the 19th century.

⁵⁰⁰ *Buffalo Commercial Advertiser* 26 June 1850, 2.

⁵⁰¹ Hunter 1993, 123.

⁵⁰² Sawyer 1977, 76; Hunter 1993, 130-3; 137-8.

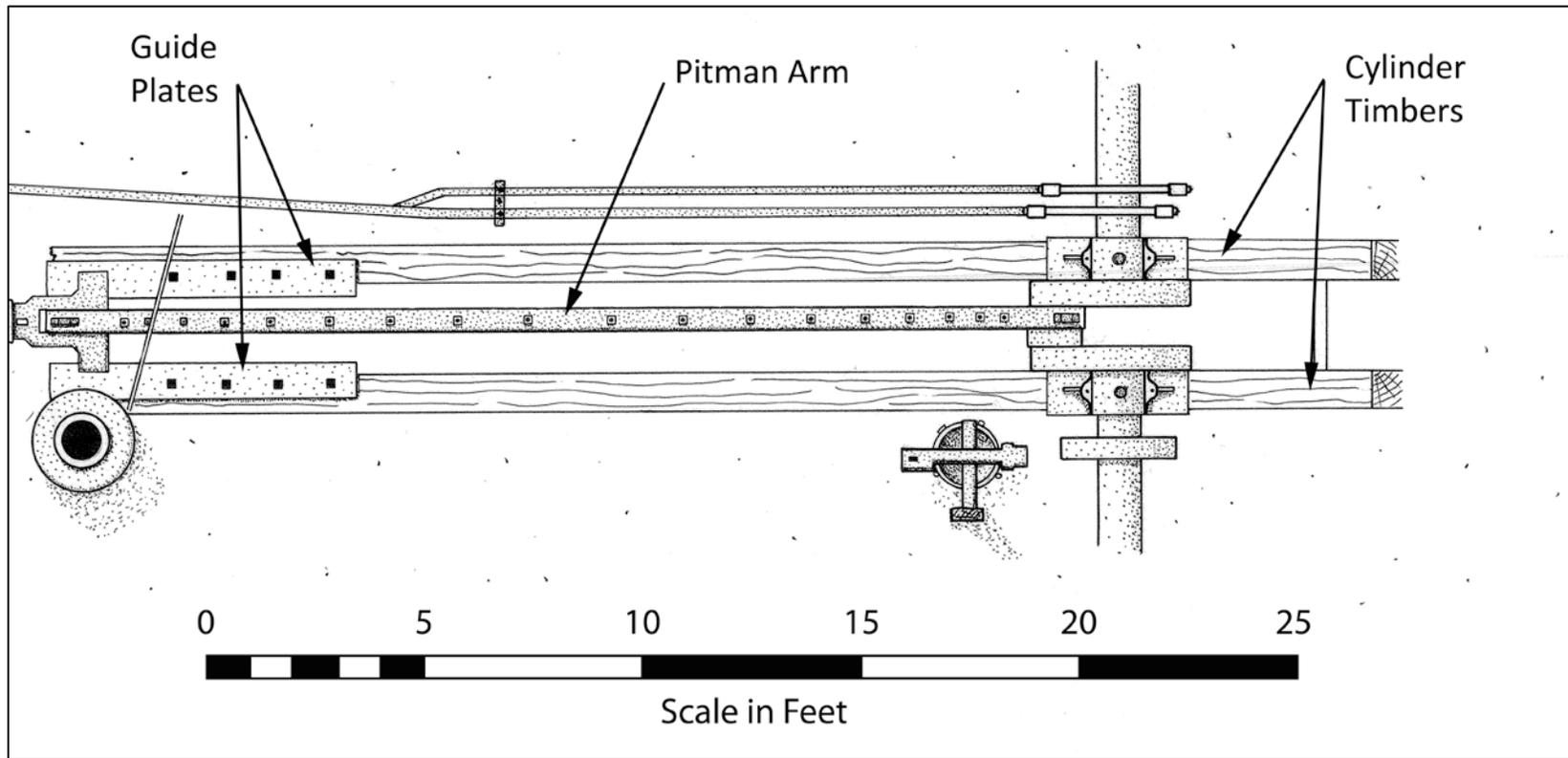


Figure 62: Detail of pitman between the crosshead and cranks.

The design of *Anthony Wayne's* steam engine was standard for western river steamers dating to the late 1830s. The engine was comprised of a single cylinder mounted horizontally forward of amidships. Bates describes the workings of this type of assembly:

The basic elements of the reciprocating steam engine are an enclosed cylinder containing a piston and a valve or valves to control the admission and exhaust of steam to and from the cylinder. To make such an engine run, steam is admitted to one end of the cylinder and allowed to exhaust from the other. The pressure on the admission side of the piston pushes it toward the exhaust end. Four 'events' take place during every stroke of the piston. At the beginning of the stroke steam is admitted and the opposite exhaust is released. At some point along the stroke the exhaust is stopped and compression occurs to cushion the shock of the admission in the opposite direction.⁵⁰³

Steam admission and exhaust were controlled through the rotary motion produced by the cams and transferred to the engine via the connecting rods. The amount of steam admitted and exhausted depended on the type of cam in use, either the full-stroke or the cutoff cam. This system was very straightforward and allegedly easy to operate, in addition to being relatively compact compared to larger low pressure engines.⁵⁰⁴

⁵⁰³ Bates 1996, 39.

⁵⁰⁴ Hunter (1993, 146-53) discusses the development of the poppet valve system in great detail, including the intricacies of operation, advantages, and disadvantages.

Anthony Wayne's engine was fully intact and articulated under several feet of mud. This sediment layer was removed in the summer of 2009 and all of its features were recorded. These features included the piston, cylinder, valves, valve levers, rocker shafts, wipers, oiler, and throttle. Each component will be discussed in detail below.

Piston. The piston was seen protruding out the after end of horizontally-mounted cylinder (Fig. 63). The length of the exposed piston was 1 ft. 7 in. (48.26 cm), while the total stroke was calculated to be 8 ft. (2.44 m). The circumference of the piston ranged from 1 ft. 4.5 in. (41.91 cm) at the cylinder to 1 ft. 4 in. (40.64 cm) near the crosshead linkage, yielding a diameter of 5 in. (12.70 cm) to 5.25 in. (13.34 cm) respectively. Attached to the cylinder was the piston's follower, which was part of the stuffing box (i.e. sealing plate/gland) and assisted in preventing steam leaks from around the piston.⁵⁰⁵ The follower was roughly diamond shaped, measured 1 ft. (30.48 cm) long by 1 in (2.54 cm) thick, and was held in place with two 2.5 in. (6.35 cm) square bolts.

⁵⁰⁵ Bates (1996, 35) provides a diagram for the follower and discusses the entire stuffing box assembly: "Where rods or shafts pass through cylinder heads a gland, or stuffing box, is installed to stop leaks around the rod. The sealant is called packing and is a rope of pieces of a porous and resilient material. The following [sic] is pressured against the packing by the nuts. Lubrication for the rod is by an oiler."



Figure 63: Piston with attached follower. (D. Van Zandt, 2009)

Oiler. A lubrication reservoir, otherwise known as an oiler, was present on the after face of the cylinder head just above the piston on the starboard side (Figs. 64, 65). The oiler was responsible for lubricating the piston as it passed back and forth into the steam cylinder. Spherical in shape and made of a non-ferrous metal, the overall circumference of the reservoir was 1 ft. 6 in. (45.72 cm), giving it a diameter of approximately 5.75 in. (14.61 cm). On top of the sphere was a 2 in. (5.08 cm) tall funnel with a mouth diameter of 3 in. (7.62 cm), with a 0.313 in. (0.79 cm) opening in its bottom. The funnel sat atop a 1.25 in. (3.18 cm) square neck valve operated by a short lever, allowing the contents within the funnel to drain into the reservoir. On the exterior of the reservoir and funnel were a series of decorative etched lines; three were found on both the lower and upper hemispheres, while five were located on the funnel. Coming

off of the main reservoir was a smaller spherical bleeder valve with attached lever, used for expelling air within the reservoir as lubricant was added. The connection from the reservoir to the engine itself was inaccessible and measurement were not obtained, but the connecting pipe a single 'L'-shaped piece.



Figure 64: Steam engine oiler. (D. Van Zandt, 2009)



Figure 65: Oiler. (D. Van Zandt, 2009)

Cylinder. *Anthony Wayne*'s horizontal engine cylinder was corroded, as it was made of cast iron, but otherwise intact (Fig. 66). The cylinder was a closed tube which filled with steam and thus moved the piston forwards and backwards. Steam cylinders were usually discussed in terms of overall length and diameter, and on *Anthony Wayne* the dimensions were 8 ft. (2.44 m) and 2 ft. (60.96 cm) respectively (Fig. 67). Atop the cylinder rested an iron plate that supported the valves and rocker shafts. A layer of corrosion byproduct covered all ferrous components of the cylinder and support plate, slightly obscuring and distorting their appearance.



Figure 66: Forward end of steam cylinder. (D. Van Zandt, 2009)

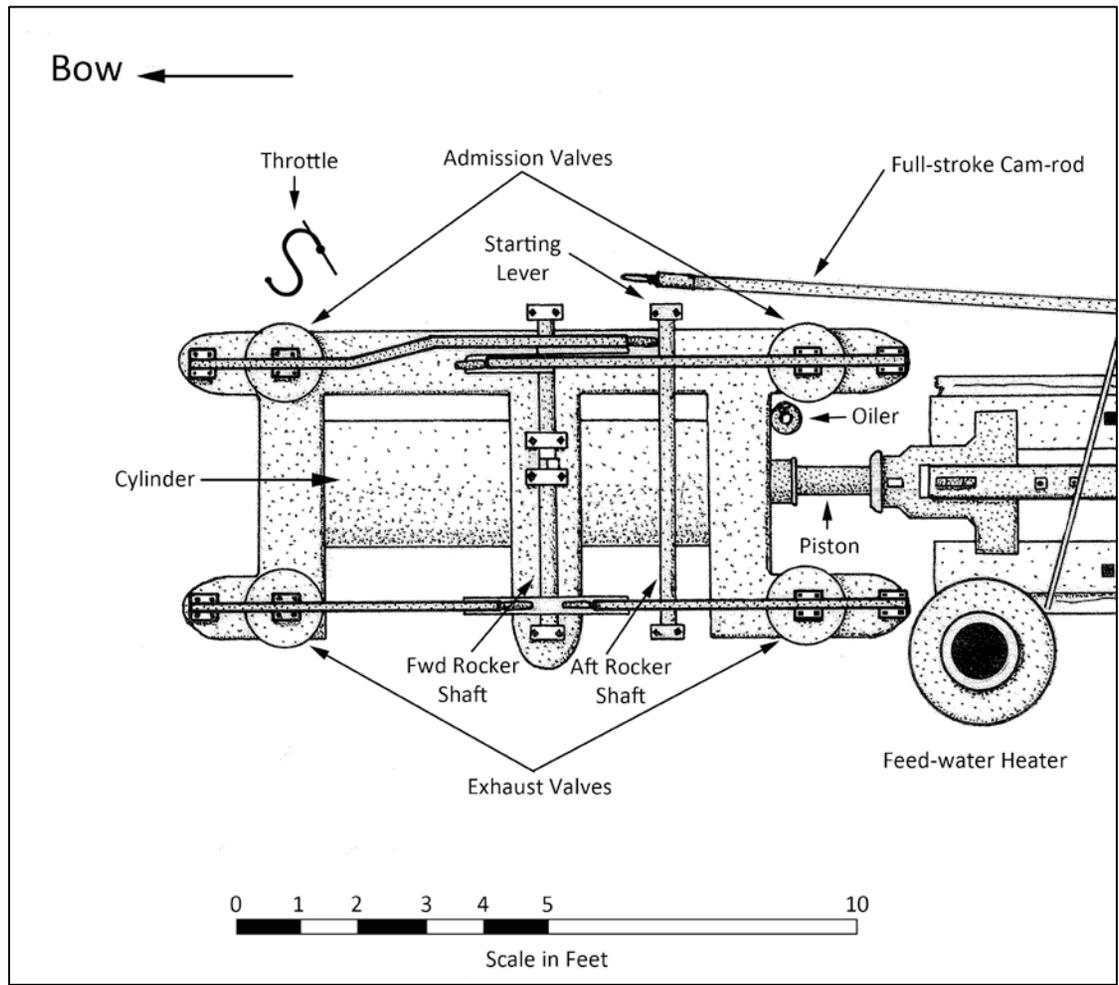


Figure 67: Diagram of *Anthony Wayne's* steam engine.

Valves, Valve Levers, and Wipers. Steam valves were a vital component of the steam engine, as they controlled how much steam was in the cylinder at any given time. To this end *Anthony Wayne* utilized four poppet valves to regulate the amount of steam in the cylinder. A poppet valve was a simple design that worked by lifting a disc off a hole that allowed steam to either enter or escape the cylinder (Fig. 68). Bates further describes the mechanics of the valve assembly: “The poppet valve consists of a hole called the seat, which is covered by a disc. Lift the disc and steam flows; drop it and the flow ceases.”⁵⁰⁶ Reciprocal motion produced by the cams acting on their frames and transferred via the connecting rods was responsible for manipulating these valves at the proper times. The ends of the connecting rods were fitted over pins that oscillated the rocker shafts. These shafts extended over the cylinder and moved back and forth from energy supplied by the connecting rods. Fixed to the end of the rocker shafts were valve lifters, called “wipers,” crescent-shaped iron bars that moved with the shafts. As the shafts rocked back and forth, one wiper would lift a corresponding valve lever and thereby open a valve and admit steam into one end of the cylinder; on the other side the valve was closed as the wiper lowered its lever. At the same time, a second wiper controlled the exhaust valves that vented steam from the opposite end of the cylinder in the same manner.

⁵⁰⁶ Bates 1996, 40.

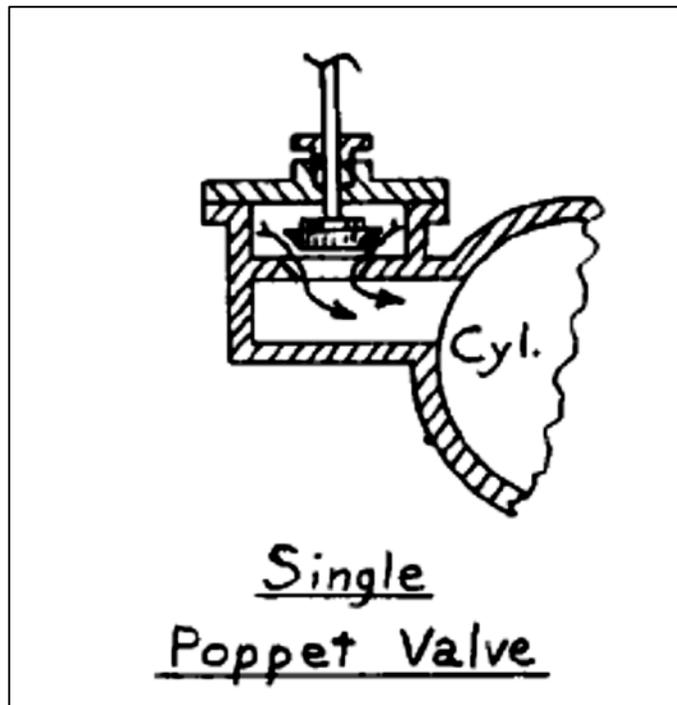


Figure 68: Diagram of a single poppet valve. (Sawyer 1978, 78)

All four steam valves were still present on *Anthony Wayne* and completely articulated (Fig. 69, 70). The valves on the starboard side were for steam admission while the valves on port were responsible for exhaust. The four valves were identical in shape and dimensions. The valves were circular in plan view and measured 16 in. (40.64 cm) in diameter. The diameter of each valve shaft was 2.7 in. (6.86 cm) and all were located 1 ft. 4 in. (40.64 cm), on center, away from the valve lever pivots. The internal workings of the valve system could not be recorded without taking them apart (which was not possible). The collar around each shaft was made of brass, as were the bearings that fasten the valves to the levers. The bearings were composed of two pieces, a base and a cap, sandwiched together with four bolts, giving it a crenellated appearance on each side. A 0.5 in. (1.27 cm) thick iron plate at the base of each valve shaft fastened the

shaft to the larger iron support plate atop the cylinder with four bolts. The height of the non-extended valve shaft assembly was approximately 8 in. (20.32 cm), from the top of the bearing mount to the bottom of the valve plate.



Figure 69: *Anthony Wayne*'s forward steam admission valve. (D. Van Zandt, 2009)

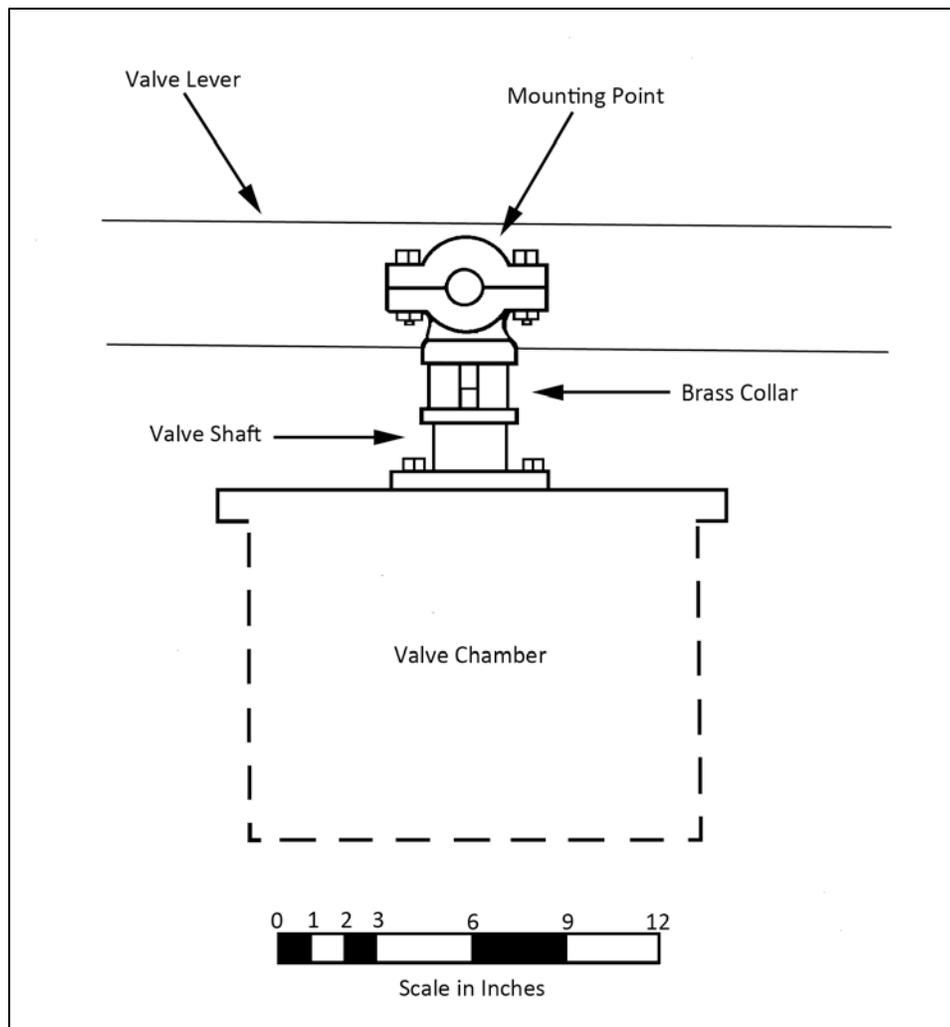


Figure 70: Steam valve shaft detail.

Overhanging the steam cylinder on the support plate were the four valve lever pivots. These pivots were nearly identical to the valves in terms of composition, shape, and measurements (Fig. 71). The brass bearing mount was fixed around a 1 in. (2.54 cm) pin on the valve lever and attached to a 2.55 in. (6.48 cm) diameter rod set into a 1 in. (2.54 cm) thick iron plate. The height of the rod was approximately 10.5 in. (26.67 cm) tall, slightly longer than the non-extended valve shaft assembly.



Figure 71: Valve lever pivot. (D. Van Zandt, 2009)

The steam valves were controlled by four long levers that were raised and lowered by the wipers (Fig. 72). The levers that controlled the exhaust valves on the port side were both 5 ft. 6 in. (1.68 m) long and met end-to-end near the forward rocker shaft. The levers were each 2 in. (5.08 cm) wide by 4 in. (10.16 cm) thick where they were attached to the valve shafts; they tapered down to 3 in. (7.62 cm) thick at the ends. On the starboard side, however, the levers were considerably longer, 7 ft. 3 in. (2.21 m), and overlapped one another by 3 ft. 3 in. (99.06 cm). This configuration allowed the exhaust and admission wipers to be mounted in the same manner, but operate valves at opposite ends of the cylinder. For instance, when starboard wiper rocked forward and raised the

forward admission valve, the port wiper raised the aft exhaust valve; when rocking aft, the starboard wiper raised the aft admission valve while the port wiper raised the forward exhaust valve. At the end of each lever was a 6 in. (15.24 cm) long handle, which was used when manual control of the valves was required (e.g. starting up the engine required all four levers to be raised in order to set the wipers).

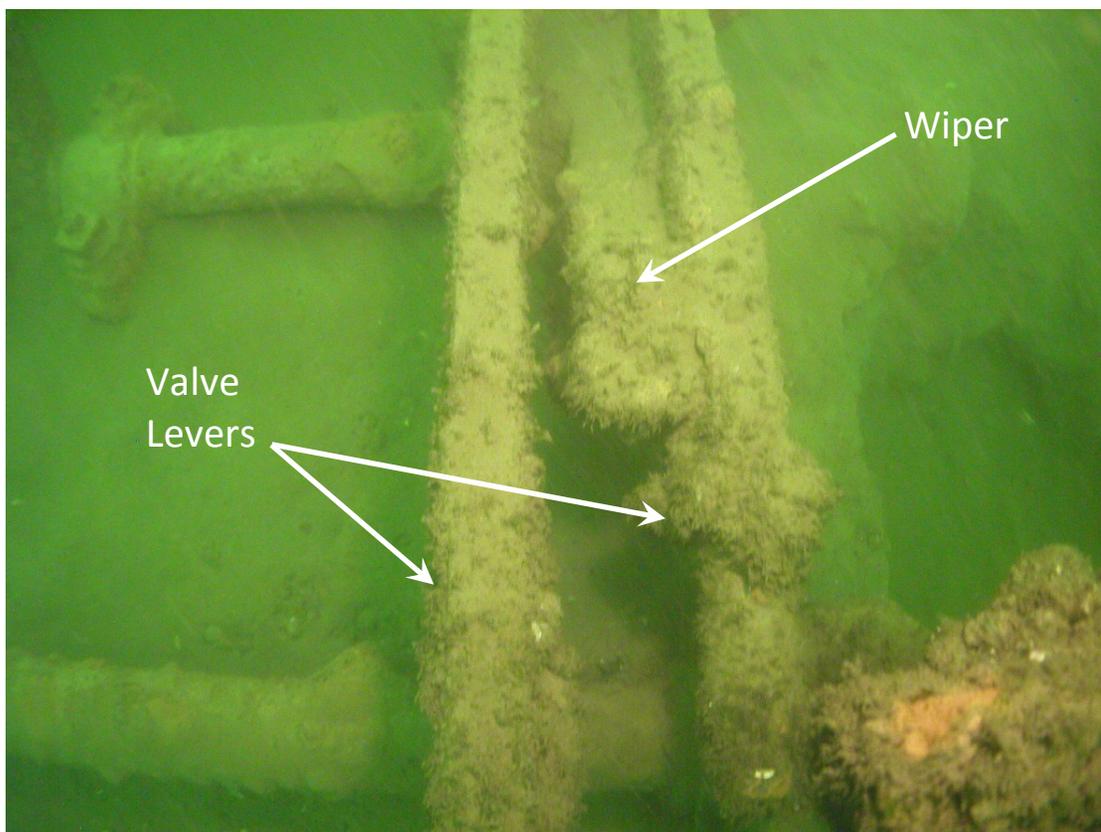


Figure 72: Starboard valve levers and wiper. (D. Van Zandt, 2009)

The rocker shafts, mounting a wiper at each end, measured 3 in. (7.62 cm) in diameter and spanned 4 ft. (1.22 m) in length. Four brackets, bolted to the support plate

atop the cylinder, held the shaft in place. The forward rocker shaft was composed of two lengths that met at the centerline of the cylinder. Between the two central brackets were two perpendicular alignment pins used to fine tune each side of the rocker shaft and thus the timing of the wipers (Fig. 73). The wiper on the port side consisted of one solid piece, while the starboard wiper was comprised of two pieces secured side-by-side to reach the overlapping levers. The wipers were the same size, 2 ft. 8 in. (81.28 cm) in length and approximately 3 in. (7.62 cm) in width.



Figure 73: Rocker shaft alignment pins. (D. Van Zandt, 2009)

On the starboard side of the after rocker shaft was the starting lever, or reverse lever, used to switch the engine from forward propulsion to backwards movement (Figs. 74, 75). This was done by placing the end of full stroke connecting rod on one of two

pins coming off the starboard end of the bar. The lower pin was used when getting underway or going forward, while the upper pin was used for reverse. The lever has an overall height of 3 ft. 7 in. (1.10 m), and varies in width from 2 in. (5.08 cm) up to 7 in. (17.78 cm).



Figure 74: Starting lever. (D. Van Zandt)

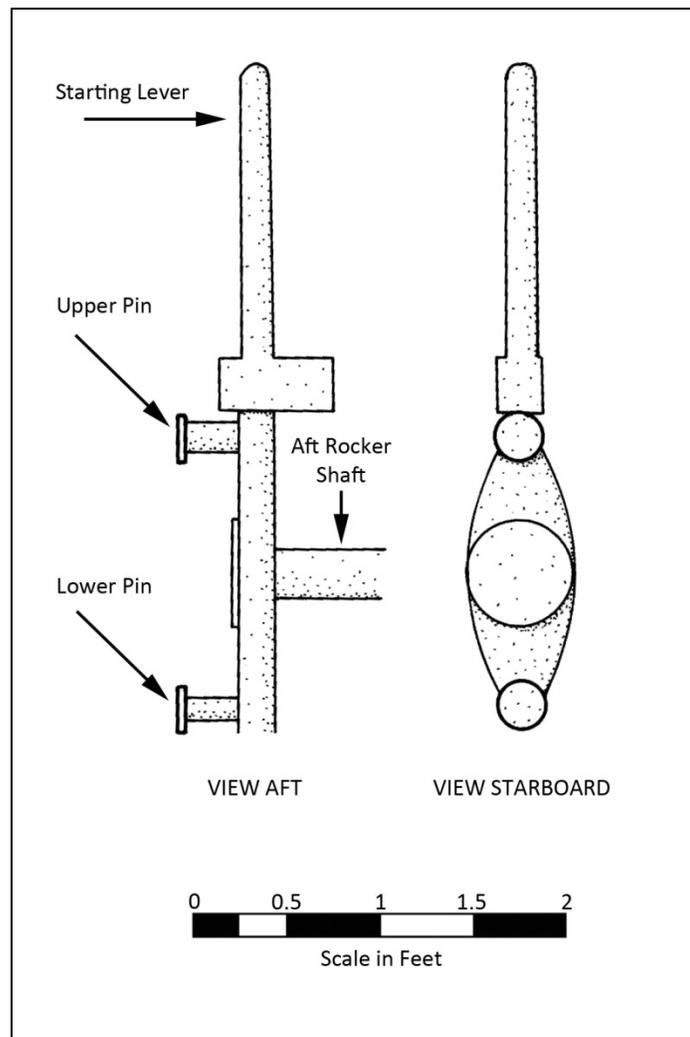


Figure 75: Starting lever detail.

Throttle. The final feature of the engine assembly was the engine's throttle on the starboard side of the cylinder forward of the rocker shafts (Figs. 76, 77). The throttle was an 'S'-shaped iron crank and was the primary means of starting, stopping, and controlling the speed of the steamboat. The throttle's crank was 1 ft. (30.48 cm) in length by 1 in. (2.54 cm) thick, with a 6 in. (15.24 cm) long handle at its end. The crank

was mounted on a 2 in. (5.08 cm) threaded rod. As the crank turned, it moved a 1 ft. 6 in. (45.72 cm) long iron bracket along the rod to adjust the amount of steam entering the cylinder. Due to project time constraints, the bottom of the bracket was not excavated and this was assessed by touch only.



Figure 76: *Anthony Wayne's* throttle. (D. Van Zandt, 2009)



Figure 77: Throttle. (D. Van Zandt, 2009)

Feed-water System

Another feature documented during the excavation of *Anthony Wayne's* engine and pitman was the feed-water system that supplied water to the steamer's boilers through a series of pumps and pipes. Since cold water was known to severely stress hot boilers, the incoming water was heated using the exhausted steam from the engine to safeguard against explosions.⁵⁰⁷ This system was powered directly by the engine and

⁵⁰⁷ Bates 1996, 13.

only worked while the engine was in operation. When the engine stopped, the pump stopped supplying water to the boilers.

On *Anthony Wayne*, only two components of this system were observed, the feed-water pump and the feed-water heater. Both the pump and the heater were located on the steamer's port side of the cylinder timbers next to the pitman arm. The connecting rods that operated the pump no longer survive; the heater's chimney and pipes were also missing, so the exact configuration of the arrangement remains unknown. The placement of these components, however, is standard for western river steamboats. Zebra mussels completely covered the pump assembly and iron concretion was also thick, which together obscured details and made data collection challenging.

Feed-water Pump. The feed-water pump was located immediately forward of the drive shaft on the steamer's port side and comprised of two primary pieces, an iron pump and a vertical support timber (Figs. 78, 79). The pump consisted of a basin set atop a large-diameter pipe. The mouth of the basin measured 1 ft. 6 in. (45.72 cm) in diameter and 10 in. (25.40 cm) deep. The thickness of the basin was not determined due to marine growth and corrosion byproduct. Beneath the basin was a 9 in. (22.86 cm) diameter pipe that ran vertically down into the substrate. The height from top of the cylinder timbers to the top of the basin was approximately 3 ft. 2 in. (96.52 cm). Three iron legs were spaced equally around the pump and ran from the mouth of the basin down into the mud, each one measuring from 1.5 in. (3.81 cm) to 2.5 in. (6.35 cm) in diameter. On the main pipe directly above the lake bottom were two 3 in. (7.62 cm) diameter openings that

were the seats for the feed-water pipes. One opening was situated on the forward side of the pump, while the second pointed toward the starboard bow.

Standing next to the pump was a tall vertical support timber. The timber, which measured 8 in. (20.32 cm) wide by 3.5 in. (8.89 cm) thick, extended over 6 ft. (1.83 m) above the bottom of the lake. Its primary function was to support a 4 in. (10.16 cm) wide horizontal iron rod. Situated directly over the pump's basin, the rod was 1 ft. 8 in. (50.80 cm) long and had mounted onto it a cross-piece. This cross-piece, probably the lever or "brake" that raised and lower the pump's spear and valve, was 2 ft. 10 in. (86.36 cm) long and had its forward end elevated above the basin while the after end was level with the mouth of the basin.



Figure 78: *Anthony Wayne's* feed-water pump. (J. Papes, 2007)



Figure 79: Feed-water pump. (A. Morrison, 2008)

Feed-water Heater. The steamboat's feed-water heater was located immediately abaft the cylinder's port side (Figs. 80, 81). The heater consisted of a large cylinder that received cold water from the feed-water pump. Steam exhausted from the engine was directed into this cylinder to pre-heat the cold incoming water before it entered the boilers. The cylinder had an overall diameter of 2 ft. 5 in. (73.66 cm) and 3 ft. 9 in. (1.14 m) of its height was exposed in 2009, but its total height was not obtained as it was partially buried. A 1 ft. 5 in. (43.18 cm) diameter raised collar was found on the top of the cylinder enclosing a 10 in. (25.40 cm) opening for the steam escape pipe that vented above *Anthony Wayne's* superstructure. On the forward side of the cylinder were the

remnants of a 4 in. (10.16 cm) diameter pipe fitting, but the piece was heavily concreted. This pipe carried the heated water from the cylinder forward to the boilers. No other pipe fittings or openings were observed.

While the bottom of the heater was buried, a physical assessment was performed in which a diver felt down into the mud along the exterior of the cylinder. The body of the cylinder ended a few inches down into the substrate, but had no bottom, as the diver could feel into the interior of the cylinder. This assessment was done on the after side of the heater only.

Sitting atop the feed-water heater was a small, non-articulated metal band (Fig. 82). The warped band was 2 in. (5.08 cm) in width and had a line of small holes punched along its centerline. The band exhibited no corrosion, indicating a non-ferrous composition. It did not appear to belong to the feed-water heater or any other feature of the shipwreck, but could possibly be a component of the steam escape pipe. Due to its placement on top of the heater and the lack of similar or companion pieces on site, it is possible that this band is not contemporary with the site and represents intrusive cultural material. How it came to rest in this location is unknown.



Figure 80: *Anthony Wayne's* feed-water heater. (A. Morrison, 2008)



Figure 81: Feed-water heater. (J. Papes, 2007)



Figure 82: Metal band atop the feed-water heater. (J. Papes, 2007)

Artifacts

The *Anthony Wayne* Shipwreck Survey encountered a limited number of small artifacts during the 2009 excavations. These artifacts were all discovered in test unit #2 in the area between the engine and crosshead linkage. The artifacts fell into three categories: wood, metal, and glass. The wooden and metal artifacts represented elements of the steamboat's architecture, while the single glass artifact was representative of personal effects. After discovery, all artifacts were brought to the surface for documentation purposes. Sketches, measurements, and photographs were taken before the objects were re-deposited on site. A short catalog follows which describes each artifact.

Artifact #: 001 (Fig. 83)

Description: Spike

Material: Iron

Dimensions: 9.625 in. (24.45 cm) long; 0.64 in. (1.63 cm) diameter

Location: Above crosshead linkage

Notes: The spike is round in cross-section; the head is broken off; the tip appears worn; a corrosion layer covers the artifact.



Figure 83: Artifact #001- spike.

Artifact #: 002 (Figs. 84, 85)

Description: Bottle Fragment

Material: Glass

Dimensions: 0.75 in. (1.91 cm) long (side); 1.5 in. (3.81 cm) total length; 0.125 in. (0.3175 cm) thick

Location: Between the cylinder timbers near the crosshead.

Notes: The fragment is one of blue and white glass, likely from a perfume or apothecary bottle; originally hexagonal in shape.



Figure 84: Artifact #002- bottle fragment.



Figure 85: Artifact #002- bottle fragment close-up.

Artifact #: 003 (Fig. 86)

Description: Block

Material: Wood

Dimensions: 6.375 in. (16.19 cm) long; 1.875 in. (4.76 cm) wide; 2.875 in. (7.30 cm) tall

Location: After face of engine

Notes: Wooden block saturated in pitch or oil; straight etches appear on the front face; two small metal fragments are embedded within the upper face; two 1 in. (2.54 cm) long notches on the right face.



Figure 86: Artifact #003- wooden block.

Artifact #: 004 (Fig. 87)

Description: Long Spike

Material: Iron

Dimensions: 1 ft. 9 in. (53.34 cm) long; 1 in. (2.54 cm) diameter head; 0.75 in. (1.91 cm) diameter shaft

Location: Forward end of the starboard cylinder timber

Notes: Corrosion layers covers the artifact; two large concretion masses on the upper shaft.



Figure 87: Artifact #004- long spike.

Artifact #: 005 (Fig. 88)

Description: Plank Fragment

Material: Wood

Dimensions: 2 ft. 6 in. (76.20 cm) long; 1 ft. 0.125 in. (30.80 cm) wide; 0.375 in. (0.95 cm) thick

Location: Starboard side of engine

Notes: 0.5 in. (1.27 cm) wide, 0.125 in. (0.32 cm) deep channel running transversely along the back face.



Figure 88: Artifact #005- plank fragment.

Artifact #: 006
Description: Long Spike
Material: Iron
Dimensions: 2 ft. 3.75 in. (70.49 cm) long; 2 in. (5.08 cm) circumference
Location: Outboard of starboard cylinder timber
Notes: Corrosion layer covers the artifact; no photograph available.

CHAPTER VII

DISCUSSION

The information gained from the 2008 and 2009 field seasons provided a rare opportunity to study the remains of a 19th-century side-wheel steamboat. While the vessel's hull was inaccessible, the majority of the drive system was still present on site in a remarkable state of preservation. Discussion of this data will take place in three phases: first, comments regarding the drive system's style are offered; second, the archaeological data will be compared against facts learned in primary historical documents; and third, archaeologically-studied steamboat wrecks from throughout the Great Lakes that are comparable to *Anthony Wayne* will be identified and discussed.

We can begin with a quick summary of *Anthony Wayne*'s drive system. The paddlewheels rotated on two separate paddle shafts, both moved by a single, oscillating pitman arm. Joined to the pitman arm's forward end, via a crosshead linkage, was the horizontal engine's piston. Four steam valves, two for admission and two for exhaust, sat atop the engine and were actuated by iron levers; the levers were raised and lowered (and thus the valves opened and closed) with crescent-shaped wipers that rocked back and forth; finally, the wipers, attached to a vertical starting lever, were moved back and forth by long-cam rods mounted on the starboard drive shaft. The entire system was, in essence, a self-sustaining one and needed very little attention once underway.

Anthony Wayne's drive system is typical for an early 19th-century western river steamboat. Paul R. Hodge, author and engineer, was the first individual to thoroughly

describe and illustrate this system, which was introduced in 1815 and achieved its fully developed form by the late 1830s.⁵⁰⁸ There were some alterations to the system from 1840 to 1850, namely the removal of large, centrally located flywheels and the addition of a second engine, allowing one for each wheel.⁵⁰⁹ *Anthony Wayne* was equipped with only one steam engine, but in place of a single large flywheel, one small flywheel was found on the wreck. Unlike other steamboats of the time, *Anthony Wayne* lacked drive shaft couplings that were capable of disengaging the paddlewheels at a moment's notice. Such couplings were unnecessary with the addition of a second engine, as one engine could be shut off instead of disengaging the wheel.⁵¹⁰ *Anthony Wayne*, with its single piston and no means of disengaging either side-wheel, was inherently not as maneuverable as most other steam vessels in operation at that time. Aside from these slight variations, the drive system is a near match to the style made famous on American frontier river steamboats.

The horizontal, high-pressure engine was developed specifically for the environs of the western rivers. It was essential for steamers that navigated the waters of the Mississippi, Ohio, and Missouri Rivers to be shallow draft in order to meet the potential dangers of sandbars, snags, and fluctuating water levels. Mounting the engine horizontally allowed for greater weight distribution throughout the hull, while high-pressure steam generation allowed for the greater power and faster response needed to get out of tight situations, such as groundings or swift currents.⁵¹¹ High-pressure engines

⁵⁰⁸ Hodge 1840, 230-3; Hunter 1949, 136-42; Sawyer 1978; Bates 1996, 39-51; Kane 2004, 114-25.

⁵⁰⁹ Hunter 1949, 144-6; Sawyer 1978, 77.

⁵¹⁰ Sawyer 1978, 77.

⁵¹¹ Sawyer 1978, 76.

were lighter in weight and simpler in design compared to low-pressure varieties, as the direct connection from cylinder to paddlewheels meant less mechanical parts and structural supports.⁵¹² This drive system survived virtually unchanged until the end of the 19th century and could still be found in use during the early days of the 20th century.⁵¹³

While this power plant was well suited for the western rivers, its use on the Great Lakes is not widely recognized by modern scholars. The most common type of engine on the lakes was the vertical walking beam engine. This engine type was popular amongst east coast steamers, as they were larger, heavier, and generally low-pressure systems. Since the sailing conditions on the lakes are more analogous to the eastern waters, it is understandable that these steamers would share similar power plants.

Of the hundreds of antebellum steamers that plied the Great Lakes, only sixteen have been identified as horizontal-engines equipped boats.⁵¹⁴ It is possible this number was much higher, but details of steamboat drive systems are scarce in the historical record. Therefore, it is difficult to say just how prevalent horizontal engines were on the lakes during this period.

There were advantages to employing a horizontal engine instead of a vertical engine on the lakes. Vertical engines extended up from the main deck through the hurricane deck, where cabins and communal space were often located. By contrast, horizontal engines were completely housed upon the main deck, allowing for a long,

⁵¹² Sawyer 1978, 76.

⁵¹³ Hunter 1949, 141.

⁵¹⁴ Appx. A.

uninterrupted saloon and more passenger accommodations on the upper decks.⁵¹⁵

Horizontal engines were also lighter and required less structural support than their vertical counterparts, meaning that steamers could carry greater amounts of passengers and cargo. Steamers with horizontal engines may have been slight more profitable when compared to those with vertical engines, but statistical data to substantiate that theory is lacking.

The fact that *Anthony Wayne*'s engine is apparently a style from the late 1830s is corroborated by the historical record. It was reported that during *Anthony Wayne*'s 1848 refurbishment the boat received its second engine from an older vessel, the steamboat *Columbus*, built in 1835. *Columbus* had its engine removed following a wrecking event in spring 1848. We know there was a transfer of machinery, but the particulars of the *Columbus*-*Anthony Wayne* drive system were only known from historic records. An article from the *Buffalo Commercial Advertiser* tells us that after its transfer, the drive system was improved by a man named James Menzes. The nature of the improvement was not specified nor could it be discerned in the archaeological remains.⁵¹⁶ Heyl reports that this engine was a horizontal, direct-acting (i.e. high pressure) engine, which is supported archaeologically.⁵¹⁷ When the machinery was manufactured and placed into *Columbus* is known: the *Cleveland Weekly Advertiser* states that *Columbus*'s machinery was new in 1835 and produced a fast vessel.⁵¹⁸ Despite the lack of specifics, limited

⁵¹⁵ Mansfield 1899, 400.

⁵¹⁶ *Buffalo Commercial Advertiser* 25 April 1849, 2.

⁵¹⁷ Heyl 1964, 93.

⁵¹⁸ *Cleveland Weekly Advertiser* 30 June 1835 (MHGLC 2010).

historical information suggests the engine uncovered during the 2009 field season is the one originally belonging to *Columbus*.

Historical reports and archaeological study have revealed *Anthony Wayne*'s drive system to be that of a river boat. A comparison of contemporary steamboat wrecks from the Great Lakes suggests that high-pressure-engine-equipped vessels may have been common in this region. A 2004 summary of archaeological investigations of Great Lakes side-wheelers states that only five antebellum-era shipwrecks have been discovered and documented on a professional level; these steamers are *New Orleans* (b.1844), *Superior* (b.1845), *Comet* (b.1846), *Atlantic* (b.1848), and *Lady Elgin* (b.1851).⁵¹⁹ Added to this list is *Maple Leaf* (b.1851), which left the lakes during the Civil War and was sunk by a Confederate torpedo off the coast of Florida. Two of these vessels, *New Orleans* and *Superior*, had high-pressure horizontal engines at the time of their sinking.⁵²⁰ The other four all utilized either single or dual walking beam engines. If *Anthony Wayne* is included in this group, it can be seen that almost as many archaeologically-studied steamers had horizontal engines as vertical ones. While this ratio is not corroborated in the historical record and sampling error must be taken into account, it does suggest that the drive system made famous on the western rivers was possibly more widespread on the Great Lakes than initially thought.

⁵¹⁹ Vrana 2004, 6.7-11.

⁵²⁰ *New Orleans* was built from the burned remains of the steamer *Vermilion* at Detroit, MI, and wrecked in 1849 off Thunder Bay Island in Lake Michigan (Vrana 2004, 2.11-22). *Superior* was built at Perrysburg, OH, like *Anthony Wayne*, but met its demise in 1856 after foundering in a storm off the shores on Pictured Rocks in Lake Superior (Labadie 1989, 79-82).

This archaeological comparison also shows just how rare an artifact *Anthony Wayne*'s engine is. Engines were usually recovered from wrecked steamboats in order to place them in newly built hulls. "The use of second-hand engines was common in those days when the machinery was two-thirds the cost of building a new steamer. Engines and boilers could be expected to outlast most wooden steamboat hulls."⁵²¹ This habitual reuse of marine steam engines helps explain their frequent absence or fragmented nature in the archaeological record. *Niagara*, *Maple Leaf*, and *Lady Elgin* each have elements from their drive systems remaining, but *Comet* alone has both its vertical engines and walking beams intact and still supported by large A-frames.⁵²² *Anthony Wayne* can be counted in this list as having the only complete, well-preserved horizontal drive system yet discovered. This makes *Anthony Wayne* particularly significant for it allows us to examine a second type of drive system that existed on the lakes, but was not well documented.

Of the archaeological-studied steamboats mentioned above that have some vestige of their drive system existing, *Superior* and *New Orleans* are the best suited for direct archaeological comparison with *Anthony Wayne* due to their similar drive systems. Unfortunately, *New Orleans* is completely devoid of any significant machinery as its engine was salvaged in 1851 and placed into the steamer *Iowa*.⁵²³ The steamboat *Superior*, however, has the crushed remains of the boilers and engine cylinder still

⁵²¹ Labadie 1989, 79.

⁵²² Jensen 1999, 223; Cantelas 1995, 125-45; Vrana 2004, 6.10-11; Moore 1997, 27; Olson 1994.

⁵²³ Vrana 2004, 2.22.

present on site, although disarticulated.⁵²⁴ *Superior*, at 191 ft. (m) long and over 560 tons, was larger than *Anthony Wayne* (155 ft. (27.24 m) long, 400 tons), but had a smaller capacity engine cylinder, 16.76 cu. ft. (0.47 cu. m) versus 25.14 cu. ft. (0.71 cu. m).⁵²⁵ This difference suggests that *Superior* was actually powered by two horizontal engines instead of one, since a 560-ton lake steamer would have been grossly under-powered with only a single small cylinder.⁵²⁶ The strong likelihood that *Superior* was a two-engine boat matches a trend switching to two cylinders during the mid-19th Century, a trend which resulted in greater overall power and maneuverability. Although *Superior* was built nine years after *Anthony Wayne*, elements of its machinery came from an earlier vessel, Perrysburg's first steamboat *Oliver Hazard Perry*.⁵²⁷ Additionally, *Superior* and *Anthony Wayne* were built by the same shipbuilder, Samuel Hubbell.⁵²⁸ This fact, coupled with the particulars of the drive system, makes *Superior* a prime candidate for further comparative analysis.

While *Anthony Wayne*'s engine is standard for a western river steamboat, its paddlewheels are not. Instead, they are characteristic of a style native to the Great Lakes and east coast steamers. Western river boats were built to traverse environments mired with sandbars, snags, and other obstructive hazards, and their paddlewheels were built to survive those conditions. The wheel assemblies were robust, had a limited number of arms, and no more than two flanges. This designed allowed for strength and durability,

⁵²⁴ Labadie 1989, 82; 85.

⁵²⁵ Labadie (1989, 85) provides a cylinder diameter of 16 in. (40.64 cm) and a stroke of 12 ft. (3.66 m).

⁵²⁶ Hunter (1996, 142-3) states that more power was achieved by increasing the engine size, in terms of both cylinder diameter and piston head area.

⁵²⁷ Labadie 1989, 85.

⁵²⁸ *National Daily Pilot* [Buffalo, NY] 23 July 1845 (MHGLC 2010).

while at the same time minimizing the number of parts that could be potentially impacted by the river.

A review of the western river steamboat *Heroine* illustrates this design scheme very well. The remains of *Heroine*'s port and starboard paddlewheels were excavated during field seasons in 2005 and 2006.⁵²⁹ Excavations revealed that the paddlewheel assembly consisted of two cast iron flanges mounted on a separate paddle shaft, each flange outfitted with 12 arms fit into tapered sockets. The surviving arms were thick and robust, much larger than those seen on the Great Lakes. What was particularly interesting about *Heroine*'s paddlewheels was the damage they had sustained while in service. There was significant breakage of the arm sockets in the flanges; some were so badly injured that arch-shaped iron repair pieces were attached to the arms to hold the assembly together. Despite efforts to increase strength and minimize damage, *Heroine*'s paddlewheels clearly show evidence of the rough lives endured by western river steamboats.

Anthony Wayne's paddlewheels show quite a different design from those seen on riverboats. Each wheel assembly was comprised of three cast iron flanges mounted onto the paddle shafts. Not only was there an additional flange on each wheel, but the number of paddle arms was also greater. Each flange held a total of 20 arms, all of which fit into tapered sockets (Fig. 89). While more numerous, *Anthony Wayne*'s paddle arms were of smaller width and thickness than those seen on western steamers. Since

⁵²⁹ Crisman 2007.

this steamer was designed to sail the lakes, builders did not have to adhere to the same design principles as river boats.

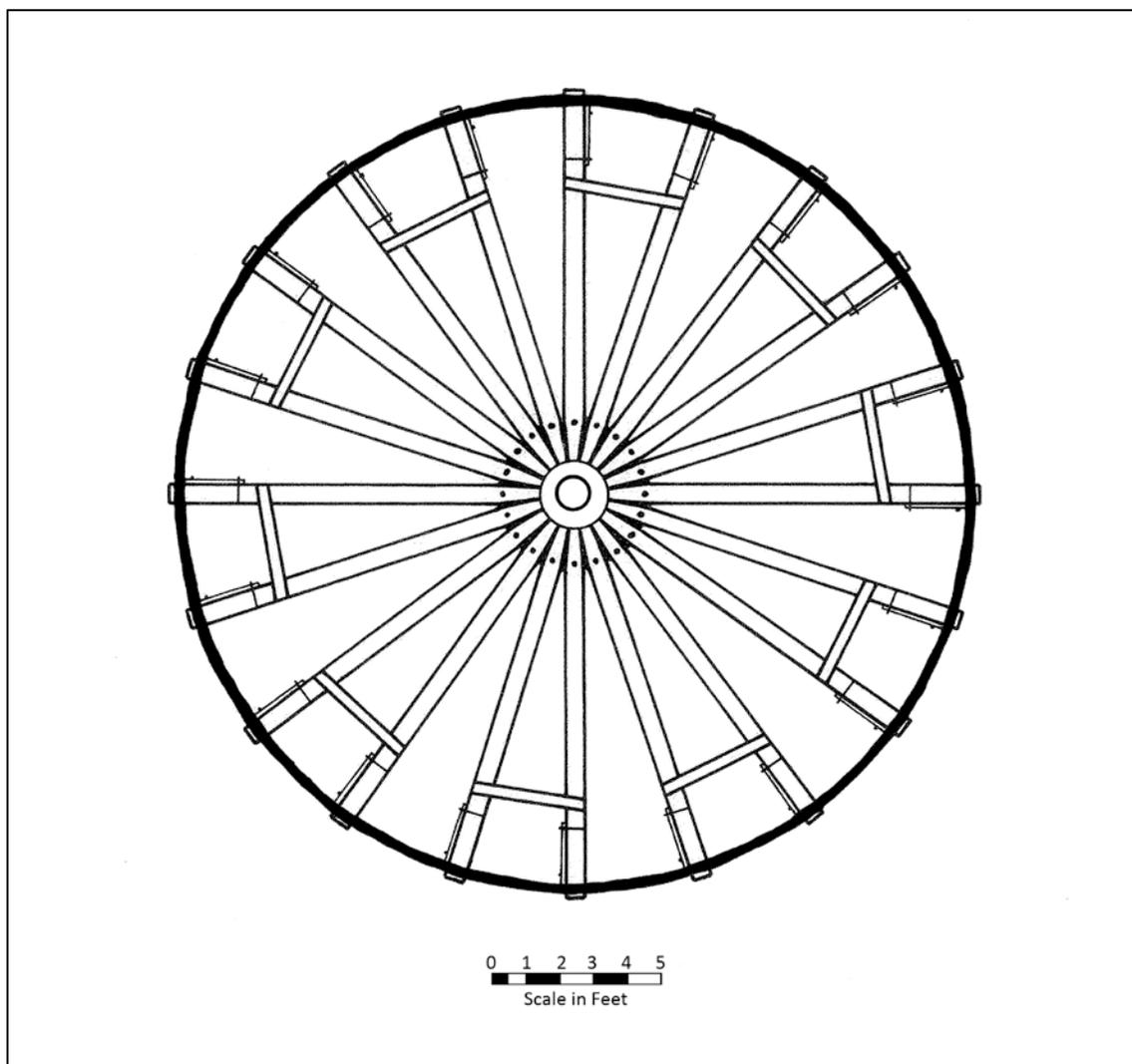


Figure 89: Reconstructed side view of paddlewheel.

Other steamboat wrecks from the Great Lakes also exhibit the paddlewheel characteristics seen on *Anthony Wayne*. The best example comes from the side-wheeler

Lady Elgin. This steamer's paddlewheels were also composed of three flanges mounted upon the paddle shaft, and had paddle arms equal to or great than 20 (an exact amount was not provided).⁵³⁰ While *Lady Elgin* was a larger boat than *Anthony Wayne*, 252 ft. (76.81 m) long compared to 155 ft. (47.24 m) long, the style of paddlewheels is nearly identical. What is not known, however, is the prevalence of this style throughout the Great Lakes. The side-wheel steamboats *Comet* and *Maple Leaf* both have remnants of their paddlewheels still surviving, but in these instances their paddlewheels only have two paddle flanges, not three.⁵³¹ Further investigation is needed to better understand why certain choices were made regarding paddlewheel design and construction.

Anthony Wayne's hogging truss system is also curious in its own right. A review of the contemporary archaeological examples cited here revealed no equivalent for the type of hogging truss present on *Anthony Wayne*. The closest parallel came from the steamer *Maple Leaf*, but caution should be exercised when drawing parallels. *Maple Leaf* operated with a walking beam engine, which possibly required a different degree of structural support, and appears to have had an arched truss that extended above the paddlewheels and terminated at the main deck.⁵³² On *Maple Leaf*, the bottom portions of the starboard hogging truss still remained, of which the truss timber measured 10.5 in. (26.67 cm) sided by 10 in. (25.4 cm) molded and would have formed a 131 ft. (39.93 m) arch over 75 percent of the vessel to strengthen the hull longitudinally.⁵³³ While the type

⁵³⁰ Van Heest 2011, personal communication.

⁵³¹ Moore 1997, 29; Cantelas 1995, 144.

⁵³² Cantelas 1995, 162.

⁵³³ Cantelas 1995, 109-11.

of truss is different, the dimensions of the truss timbers match closely those found on *Anthony Wayne*.

The side-wheeler *Niagara* exhibits a similar concept executed differently. In this case, 3 in. (7.62 cm) thick planks of varying width were fastened to the interior of the hull, over the frames and ceiling planking, in an arch shape that reached the level of the paddlewheel's drive shaft over a distance of 118 ft. (35.97 m), or 50 percent of the vessel's total length.⁵³⁴ These arches, added in 1851, were meant to supplement the arched sister keelsons and stringers already present in the vessel.

Reconstructing *Anthony Wayne*'s hogging truss system is difficult as only the upper-most portions were exposed. It is believed that the trusses extend down to the turn of the bilge in order to tie the timbers into substantial hull components (i.e. stringers, bilge strakes). Even though it has a different type of truss system, the reconstruction of *Maple Leaf*'s longitudinal strengthening components provides clues for possible terminus points on *Anthony Wayne*. Using proportions derived from the *Maple Leaf* reconstruction, *Anthony Wayne*'s truss is estimated to be approximately 116 ft. (35.36 m) in overall length.

The wreck of the steamboat *Anthony Wayne* is a significant maritime resource. While the majority of the vessel is buried, the few exposed elements have already greatly enhanced our understanding of a little-studied Great Lakes steamboat type. Its drive system is reminiscent of a western river steamboat and its steam engine is believed to be the earliest extant example of its type on the lakes. Further investigative study can be

⁵³⁴ Jensen 1999, 220.

conducted on this site and is encouraged, as the majority of the hull is believed to be submerged in the gelatinous sediment of Lake Erie. This muddy grave currently prevents archaeologists from investigating the vessel further without extensive excavation, but also protects it from additional biofouling by invasive mussels and from potential damage caused by souvenir-hunting divers. Given its age, history, condition, and uniqueness amongst other Great Lakes side-wheel steamboats, *Anthony Wayne* is a viable candidate for the National Register of Historic Places and should be protected by the State of Ohio.

CHAPTER VIII

CONCLUSIONS

This thesis has chronicled the history and archaeology of the Great Lakes side-wheel steamboat *Anthony Wayne*. This steamer represents the earliest of its kind to be archaeologically documented and provides a rare opportunity to study the remnants of a bygone and little-known Great Lakes vessel type. Given the small number of antebellum steamboat wrecks still in existence, it is difficult to say how *Anthony Wayne* compares on a larger scale to similar vessels of this type.

Anthony Wayne was built by Samuel Hubbell in Perrysburg, Ohio, in 1837 for the Perrysburg and Miami Steamboat Company. Helmed by veteran lake captain Amos Pratt, *Anthony Wayne* measured 156 ft. 6 in. (47.7 m) in length, 25 ft. 9 in. (7.85 m) in beam, 10 ft. 10 in. (3.3 m) in depth at the hold, and was registered at 390 tons. Designed to carry passengers along the southern Lake Erie shore, the steamer could accommodate several hundred travelers and was outfitted with 20 lavish staterooms, gentlemen's and ladies' cabins on the boiler deck, and steerage quarters. In addition to passengers, *Anthony Wayne* was capable of carrying approximately 1,500 barrels of freight below decks.

Shortly after its launch, *Anthony Wayne* entered into a monopoly of Upper Lakes steamboats known as the Steamboat Combination. This organization was responsible for regulating rates for passengers and freight, in addition to restricting lake traffic in order

to maximize profits for its vessels. This arrangement was unpopular with the general public and in 1845 *Anthony Wayne* withdrew from the Combination.

After ten years of service on the lakes, time had taken its toll on *Anthony Wayne* and the dilapidated steamer was sold to Charles D. Howard of Detroit. Howard and his business partner, Captain E.C. Gore, refurbished the vessel in 1848 making improvements to the hull, rebuilding the upper decks, and adding a new propulsion system. Four new boilers were installed along with the horizontal, high pressure engine recovered from the steamboat *Columbus*, which had been wrecked earlier that season. Under the command of Gore, *Anthony Wayne* made its return in the spring of 1849 and serviced the Toledo-Buffalo shipping line for the remainder of its career.

While making its way to Buffalo, disaster befell the steamer just after 12:30 am on 28 April 1850 when the vessel's two starboard boilers suddenly exploded. The blast destroyed the engine room and cause irreparable damage to both the hull and superstructure, causing *Anthony Wayne* to sink to the bottom of Lake Erie within 15 to 20 minutes. During the sinking, the upper cabins tore free of the hull and survivors used this piece of wreckage as a life raft. Despite efforts by Captain Gore and his officers to coordinate lifesaving of those on board, 38 people lost their lives or were reported missing as a result of the disaster.

The remains of *Anthony Wayne* were discovered in September 2006 by shipwreck enthusiast Tom Kowalczk approximately 7 mi. (11 km) north of Vermilion, Ohio. The shipwreck, which lies in 45 ft. (13.7 m) of water, was visited by divers from CLUE the following spring and proved to be an old steamboat broken into two parts: the

midship section, complete with two large standing paddlewheels; and the bow section. Kowalczyk and CLUE announced the find in the summer of 2007 in association with the Great Lakes Historical Society.

During two separate field seasons, the remains of *Anthony Wayne* were archaeologically assessed and recorded. In 2008, a preliminary survey produced a site plan and information pertaining to buried material situated between the two exposed sections of wreckage. In 2009, limited excavations revealed the intact remains of the steamer's horizontal engine, the earliest example yet to be recorded by archaeologists. The engine and drive system are clearly representative of a style seen on the western rivers and not believed common on the Great Lakes.

Further investigation is clearly needed to better understand construction details and patterns for early side-wheel steamboats. While *Anthony Wayne* has a unique feature in its drive system, its hull is currently inaccessible under 10 ft. (3.05 m) to 15 ft. (4.57 m) of mud and cannot be examined without large scale excavation. This prohibits any type of detailed hull analysis or reconstruction from taking place beyond the level of rudimentary conjecture. If it is uncovered and recorded at some future date, the hull could be compared against vessels such as *Superior* and *New Orleans* to see if trends exist in Great Lakes steamboat construction. Additional research should also be undertaken to chronicle the various types of steamboats hogging trusses and longitudinal support systems, as the specific conventions are presently unknown.

Historical and archaeological study of *Anthony Wayne* has provided us with detailed information on the life and death of an early Great Lakes side-wheeler. The

information presented here will serve as a comparative example for future research on similar types of vessels. *Anthony Wayne* is representative of an age of technological discovery and ingenuity, and is a surviving testament to the rich maritime heritage of the Great Lakes.

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APPENDIX A

CATALOG OF GREAT LAKES STEAM VESSELS, 1816 – 1860

This catalog is a compilation of Great Lakes steam vessel for the purpose of reviewing basic statistics and facts. Information was gleaned from known shipwreck and vessel databases, as well as historic documents. Every effort was made to ensure this catalog is as accurate as possible, but given inaccuracies in history, discrepancies are likely to exist; known discrepancies are indicated with brackets []. The catalog consists of nine fields, which include:

- Vessel Name (A= American, C= Canadian; *= paddlewheel, †= propeller, ‡= sternwheel)
- Year Built
- Tons
- Builders
- Owners
- Engine Type (cylinder diameter x stroke)
- Dimensions (Length x Breadth x Depth of Hold)
- Remarks
- Source

Source Key

1. *Milwaukee Sentinel* 23 April 1847 (originally published in *Buffalo Commercial Advertiser*, April 1847).
2. Distrunell, J. 1857. *Upper Lakes of North America: Being a Guide From Niagara Falls and Toronto to Mackinac, Chicago, Sault Ste. Marie, Etc., Passing Through Lakes Michigan and Superior, Returning Through Lakes Huron and St. Clair, to Detroit and Buffalo. New York: 185-188.* Partially reprinted in "Upper Lakes of North America," by Richard Palmer. *Inland Seas* 54(2): 155-8. Summer 1998.
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4. Chapin, Elizabeth. 1954. "Steamboats Out of Buffalo, 1830-1840, Part I, II, III." In *Inland Seas*, Vol. 10(2 & 3):102-110;163-170; Vol. 11(3):195-202.
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7. Lytle, W.M. 1975. *Merchant Steam Vessels of the United States, 1790 - 1868: "The Lytle-Holcamper List."* Staten Island, NY: Steamship Historical Society of America.

Vessel Name	Year Built	Tons	Builder	Owners	Engine Type	Dimensions	Remarks	Source
<i>Frontenac</i> (C*)	1816	740	Trebut & Chapman, Ernestown (Kingston), ON	Forsyth, Kirby, Marsh, Markland, Mitchell, Herchmer, and Yeoman [John Hamilton]	40 or 50hp side lever, low pressure (Boulton & Watt, London, ENG)	170' x 32' x 11' [150' x 35']	Burned, Sep. 1827; broken up	3 (II:89); 5; 6
<i>Ontario</i> (A*)	1817	240 [231]	Ashel Roberts, Sackets Harbor, NY	Gen. Jacob Brown, Hunter, Crane, et al	34" x 48" vertical walking beam, low pressure (Daniel Dob, NJ)	112' x 28' x 8'3" [110' x 24' x 8'6"]	Dismantled, 1832	3 (II:181); 5; 7 (163)
<i>Dalhousie</i> (C*)	1818	350	Henry Gildersleeve, Kingston, ON		Low pressure			5
<i>Queen Charlotte</i> (C*)	1818	150	Trebut & Chapman, Ernestown (Kingston), ON	John Hamilton, et al	Crosshead, low pressure (Ward Eagle Foundry, Montreal, QC)	130' x 18' x 8' [150' L.]	Wrecked, 1837 (near Catarauqui Bay, Kingston, ON); broken up, 1838	3 (II:211); 5; 6
<i>Sophia</i> (A*)	1818	49 70/95	Ashel Roberts, Sackets Harbor, NY	Elisha Camp, et al	Low pressure	67'8" x 18'2" x 4'7"	Abandoned, 1822	5; 7 (200)
<i>Walk in the Water</i> (A*)	1818	338 60/95 [342; 339]	Noah Brown, Black Rock, NY	Josephus B. Stuart, et al	36" or 40" x 48", 60hp crosshead, low pressure (Robert McQueen Works, Brooklyn, NY)	135' x 32' x 8'6" [135' x 32' x 8']	Wrecked, Oct. 31, 1821 (Point Abino, ON)	1; 2; 3 (II:275); 5; 6; 7 (224)
<i>Experiment</i> (C*)	1821		Penetang, ON		Low pressure			5
<i>Caroline</i> (A*, aka <i>Carolina</i>)	1822	80 [46; 45]	New York City, NY [Charleston, SC; Ogdensburg, NY]	Commodore Corelius Vanderbilt	Crosshead, low pressure (Fulton Iron Works, NY)	71' x 20'6" x 5'6"	Burned, Dec. 29, 1837 (Niagara Falls)	1; 5; 6; 7 (30)
<i>Dalhousie</i> (C*)	1822		Prescott, ON		20hp, low pressure	80' L.	Collided w/ <i>Niagara</i> , 1826; burned, 1834	5
<i>Superior</i> (A*)	1822	346.4 [358, 300]	Noah Brown, Buffalo, NY	Noah Brown, et al	40" x 48" crosshead, low pressure (Robert McQueen Works, Brooklyn, NY- from <i>Walk in the Water</i> , 1818)	126'6" x 28'8" x 10'6"	Converted to ship, 1833	1; 2; 3 (II:247); 5; 7 (205)

Vessel Name	Year Built	Tons	Builder	Owners	Engine Type	Dimensions	Remarks	Source
<i>Ogden, Martha</i> (A*)	1823	150 [148; 49; 48]	Albert Crane, Sackets Harbor, NY	L. & S. Dennison	Crosshead, low pressure	104' x 23' x 9'	Grounded, Nov. 12, 1832 (near Stoney Point, NY)	3 (II:133); 5; 6; 7 (138)
<i>Chippewa</i> (A*)	1824	100	Buffalo, NY		Low pressure		Broken up, after 1827	1; 2; 5
<i>Queenston</i> (C*)	1824	350	Niagara Harbour & Dock Co., Queenston, ON	John Hamilton [Hugh Richardson]	Low pressure	145'7" x 23'10" x 10'2"	Converted to tow boat, after 1831	3 (II:215); 5
<i>Toronto</i> (C*)	1824		York (Toronto), ON		Low pressure			5
<i>Clay, Henry</i> (A*)	1825	301 [348]	James L. Barton, Black Rock, NY	James L. Barton, et al	60hp crosshead, low pressure (Robert McQueen Works, Brooklyn, NY)	125' x 27' x 9'8" [125' x 27' x 10']	Broken up, Nov. 11, 1835 (Buffalo, NY)	1; 2; 3 (V:141); 5; 6; 7 (94)
<i>Enterprise</i> (A*)	1825	250 [230; 219; 218]	Levi Johnson, Cleveland, OH	Turhooven Brothers, Levi Johnson	60 - 70hp, high pressure (Pittsburg, PA)	101' x 25'3" x 9'7"	Lost, 1835	1; 2; 5; 7 (65)
<i>Niagara</i> (A*)	1825	156.97 [180]	Black Rock, NY	A.H. Porter, et al	Low pressure	102' x 20'11" x 8'	Collided w/ steamer <i>Pennsylvania</i> , Jul. 7, 1837; burned, 1842	1; 2; 5; 6; 7 (157)
<i>Pioneer</i> (A*)	1825	125 [231; 124; 120]	Benjamin Wilson, Black Rock, NY	A.H. Porter, et al	33hp, high pressure	98' x 16'9" x 8'5" [98' x 17' x 8']	Broken up, Jul. 9, 1834	1; 2; 4 (II:106); 5; 6; 7 (173)
<i>Seneca Chief</i> (A*)	1825	26 84/95	Buffalo, NY	Thaddeus Joy, et al		73'3" x 13' x 3'		5
<i>Canada</i> (C*)	1826	250	Joseph Dennis, Rouge River (near Toronto), ON	Hugh Richardson	Two 36" x 129" steeple compound engines (Hess & Ward, Montreal, QC)	127' x 21'7" x 9'	Wrecked in storm, 1837 (near Oswego, NY)	3 (II:23); 5; 6
<i>King, Rufus</i> (A*)	1826	131	New York City, NY				Abandoned, 1845	5; 7 (189)

Vessel Name	Year Built	Tons	Builder	Owners	Engine Type	Dimensions	Remarks	Source
<i>Michigan</i> (A*)	1826	156 92/95	Black Rock, NY			102' x 20'10" x 8'		5
<i>Penn, William</i> (A*)	1826	214 [275; 250]	Asa Standart, Presque Isle (Erie), PA	Erie & Chautaugua Steamboat Co.	38" cyl., 120hp crosshead, low pressure	95' x 25' x 8' [100' x 19'6" x 7'6"]	Broken up, May 28, 1836 (near Erie, PA)	1; 2; 3 (II:283); 5; 6; 7 (232)
<i>Alcioppe</i> (C*, aka <i>United Kingdom</i>)	1828	450	Niagara, ON	Robert Hamilton, et al	Two 120hp horizontal engines, high pressure (from <i>Frontenac</i> , 1816)	140' x 28'	Rebuilt/renamed, 1832; wrecked, Nov. 1835 (near Oswego, NY)	5; 6
<i>Argo</i> (A*)	1829	9 [8]	Capt. John Burtis, Detroit, MI	Capt. John Burtis	5.5" x 19", 4hp, high pressure	42' x 9' x 2'5"	Abandoned, 1836	5; 7 (12)
<i>Kempt, Sir James</i> (C*)	1829	150 - 200	Henry Gildersleeve, Bath, ON				Broken up, 1841	5
<i>Newburyport</i> (A*, aka <i>Newberryport</i>)	1829	75	Erie, PA		High pressure		Stranded, Oct. 1834 (near Chicago, IL)	1; 2; 5; 6
<i>Peacock, William</i> (A*)	1829	120	Asa Standart [Steward & Bidwell], Barcelona, NY [Portland, NY]	Eliphalet Tinker, et al	50hp, high pressure (M. Stackhouse, Pittsburgh, PA)	102' x 19' x 7'6" [102' x 19' x 7']	Boiler explosion, broken up, 1835 (near Ripley, OH)	1; 2; 5; 6; 7 (232)
<i>Winnebago Chief</i> (A*)	1829		Green Bay, WI					5
<i>Adelaide</i> (C*, aka <i>Champlain</i>)	1830	225 90/95 [230]	Chippewa, ON	Robert Hamilton	60hp, low pressure (from <i>Alcioppe</i> , 1828)		Grounded, May 3, 1840 (off St. Joseph, MI)	1; 2; 5; 6; 7 (32)
<i>Brownville</i> (A*)	1830	93	Brownville, NY		22hp	84' x 20'1" x 10'2"		5
<i>Great Britain</i> (C*)	1830	500 [700]	Brown & Bell, Prescott, ON	John Hamilton	Two vertical walking beam engines	147' x 23' x 12'	Converted to sailing vessel; foundered, 1848	3 (II:105); 5

Vessel Name	Year Built	Tons	Builder	Owners	Engine Type	Dimensions	Remarks	Source
<i>Ohio</i> (A*)	1830	157 43/95 [188; 187]	Augustus Jones, Sandusky, OH	Benjamin P. Cahoon	Two vibrating cylinders, pistons attached at right angles, high pressure (Pittsburg, PA)	106'9" x 19'7" x 8'6" [138' x 20' x 7']	Burned, 1842 (Toledo, OH)	1; 2; 5; 6; 7 (162)
<i>Shannon</i> (C*, aka <i>Unicorn</i>)	1830	120	Fleming, Hawkesbury, ON	Ottawa & Rideau Forwarding Co.	(Maudslay & Sons, London, ENG- from <i>Quebec</i> , 1818)	105' x 25' x 6'	Rebuilt, 1837; renamed, 1847; broken up, 1848	2; 5
<i>Thompson, Sheldon</i> (A*)	1830	242 [241]	Fairbanks Church, Huron, MI	Augustus Walker, et al	Low pressure (Pittsburg, PA)	123' x 22'6" x 9'4"	Broken up, abandoned, 1838	1; 2; 5; 7 (198)
<i>Carroll, Charles</i> (A*)	1831	69	Calvin Case, Sackets Harbor, NY	Calvin Case	28hp, low pressure	81'8" x 14'6" x 6'3"	Converted to schooner; abandoned, 1837	5; 7 (33)
<i>Gratiot</i> (A*, aka <i>General Gratiot</i>)	1831	45 [63; 62]	Augustus Jones, Black River (Charleston), OH	Francis J. Browning	High pressure	84' x 15'3" x 4'6"	Broken up, abandoned, 1841	1; 2; 5; 7 (80)
<i>Superior</i> (C*)	1831	174.78	Montreal, QC	Molson Interests		101.25' x 19.5' x 9.17'	Broken up, 1852	5
<i>William IV</i> (C*)	1831	450	James Wood, Gananoque, ON	Hon. John MacDonald, et al	55" x 96", 200hp vertical walking beam (Bennett & Henderson Foundry, Kingston, ON)	140' x 25' x 10' [135' x 25' x 10']	Retired, 1858 or 1859	3 (II:281; VI:335); 5
<i>By, John</i> (C‡)	1832	100	John Kirby, Kingston, ON	Robert Drummond	High pressure	110' x 26'	Grounded, Oct. 25, 1833 (near Port Credit, ON)	5; 6
<i>Canada</i> (C*)	1832		Montreal, QC	St. Lawrence Steam Boat Co.	65hp horizontal engine	125'8" x 29' x 10'4"	Broken up, 1852	5
<i>Chieftain</i> (C*)	1832	272	Alexander Young, Coteau du Lac, ON			132'8" x 17'8" x 9'1"	Retired, 1865	5
<i>Constitution</i> (C*, aka <i>Transit</i>)	1832	350	Louis Shickluna, Oakville, ON	Hamilton Joint Stock Co.	Vertical walking beam (Ward Eagle Foundry, Montreal, QC)	130' x 25'8" x 8'	Renamed, 1838; collided w/ <i>Sovereign</i> , 1846; dismantled, 1849	3 (VI:69); 5

Vessel Name	Year Built	Tons	Builder	Owners	Engine Type	Dimensions	Remarks	Source
<i>General Brady</i> (A*)	1832	65.095 [100; 66]	Detroit, MI	John Burtis, et al	High pressure		Converted to schooner, 1844	1; 2; 5; 7 (79)
<i>Pennsylvania</i> (A*)	1832	305 24/95 [395; 380]	J. Richards, Presque Isle (Erie), PA	W.H. Bruce, et al	180hp, high pressure (Waren & Benny, Pittsburg, PA)	139' x 25'4" x 9'3"	Broken up, 1841	1; 2; 4 (III:202); 5; 7 (170)
<i>Perseverance</i> (A*)	1832	23 [50; 22]	Erie, PA		High pressure	45' x 12'6" x 4'9"	Broken up, 1843 (Monroe, MI); abandoned, 1835	1; 2; 5; 7 (170)
<i>Temperance</i> (A*)	1832	23	Erie, PA					5
<i>Uncle Sam</i> (A*)	1832	236 [280; 174; 170]	William Treat, Grosse Isle, MI	Detroit, Monroe & Maumee Steamboat Co.	Low pressure	106'6" x 23'2" x 7'4.5"	Converted to bark, 1844; wrecked, 1847	1; 2; 5; 7 (217)
<i>United States</i> (A*)	1832	386 28/95	William Capes, Oswegatchie (Ogdensburg), NY	H. Fitzhugh, Gariet Smith, et al	Two 40" x 96" vertical walking beam engines (William Avery, Syracuse, NY)	142'2" x 26'2" x 11'	Abandoned, 1842	3 (II:263); 5; 7 (219)
<i>White Pigeon</i> (A*)	1832	128	Black River, OH		Low pressure		Abandoned, 1834; sold, 1837	5; 7 (229)
<i>Avery, William</i> (A*)	1833	191	Sackets Harbor, NY					5
<i>Barney, Matilda</i> (A‡)	1833		Deacon & McCaleb; Joseph Fisbay (carpenter), St. Joseph, MI		(P.B. Andrews, St. Joseph, MI)	80' x 17'		5; 7 (141)
<i>Britannia</i> (C*)	1833	298 56/94	Montreal, QC	John & David Torrance	Vertical walking beam	132'3" x 26'4" x 8'	Dismantled, 1856	5
<i>Brockville</i> (C*)	1833		Brockville, ON			145' x 23'	Retired, 1856	5
<i>Canadian</i> (C*)	1833		Kingston, ON	John G. Parker	45hp, low pressure (Ward Eagle Foundry, Montreal, QC)	108' x 16' x 32'	Collided w/ steamer <i>Novelty</i> , 1853 (Bay of Quinte)	5

Vessel Name	Year Built	Tons	Builder	Owners	Engine Type	Dimensions	Remarks	Source
<i>Cobourg</i> (C*)	1833	500	Cobourg, ON [Gananoque, ON]	Charles and James McIntosh	Two vertical beam engines, low pressure	165' L.	Retired, 1844 or 1845	3 (II:51; VI:55)
<i>Commodore Barrie</i> (C*)	1833	275	Henry Gildersleeve, Kingston, ON		Reported as twin engine	144' x 38'	Collided w/ schooner <i>Canada</i> , Apr. 30, 1842 (off Long Point, ON)	5; 6
<i>Detroit</i> (A*)	1833	137 65/95 [240]	Swan Creek, MI [Toledo, OH]	Detroit River Steam Navigation Co.	High pressure (later used in <i>G.W. Dole</i> , 1838, and <i>Columbia</i> , 1848)		Wrecked, 1837; abandoned, 1839	1; 2; 5; 7 (54)
<i>Downing, Jack</i> (aka A*, <i>Major Downing</i>)	1833	54 75/95 [80; 45]	Zadoc Pangborn, Mt. Clemens, MI	Lewis Godad	7hp, high pressure [low pressure]	76' x 15'6" x 5'	Converted to schooner, 1834	1; 2; 5
<i>General Porter</i> (A*, aka <i>Sir Charles Adam</i> ; C†, aka <i>HMS Toronto</i>)	1833	342 72/95 [430; 352]	James Carrick, Black Rock, NY	John B. Macy, et al	140hp crosshead, low pressure (Gibson, Grayson & Co.)	147'1" x 27'10" x 9'3" [150' x 27'6" x 9'6"]	Rebuilt several times; lost or destroyed, 1847	1; 2; 3 (V:115); 4 (II:164); 5; 7 (81)
<i>Governor Marcy</i> (A*)	1833	161 80/95	Pratt, Taylor & Co., Black Rock, NY		35hp vertical walking beam, low pressure	125' x 18'6" x 7'3" [130' x 32']	Wrecked, Jun. 4, 1847 (near Dunkirk, NY); broken up, after 1849	1; 2; 4 (II:163); 5; 6; 7 (88)
<i>Jackson, Andrew</i> (A*)	1833	49 34/95 [65; 50]	Gray & Gollagher; A.J. Saunders (carpenter), Mt. Clemens, MI	Elliott Gray, et al	High pressure		Abandoned, 1837	1; 2; 5; 7 (10)
<i>Kingston</i> (C*)	1833	200	Kingston, ON			86'6" x 12'3" x 4'10"	Sunk by ice, 1834	5
<i>Lady of the Lake</i> (A*)	1833	60 [30; 26.06]	Mt. Clemens, MI	Hopley Drew, et al	12hp, high pressure	125'6" x 17'6" x 6'6"	Broken up, after 1839	1; 2; 5; 7 (124)

Vessel Name	Year Built	Tons	Builder	Owners	Engine Type	Dimensions	Remarks	Source
<i>Little Western</i> (C*, aka <i>Western</i> ; <i>Cynthia McGregor</i>)	1833	60	Chatham, ON		High pressure		Burned, Oct. 1838; rebuilt/renamed, 1838; burned, Apr. 27, 1842 (Detroit, MI)	1; 2; 6
<i>Michigan (A*)</i>	1833	472 [500]	Oliver Newberry; Fairbanks Church (carpenter), Detroit, MI	Oliver Newberry	Two 40 x 87", 80hp vertical beam engines, low pressure (Silas Battell, Buffalo, NY, by Detroit Iron Co., Detroit, MI)	145' x 29' x 11'	Broken up, 1853 or 1854	1; 2; 3 (II:145); 4 (III:200); 5; 7 (144)
<i>Neptune (C*)</i>	1833	184	David John Smith, Kingston, ON	Donald Bethune			Broken up, 1849	5
<i>New York (A*)</i>	1833	325	Black Rock, NY		High pressure	141' x 24' x 10'2"	Abandoned, 1841	1; 2; 5; 7 (156)
<i>Newberry, Oliver(A*)</i>	1833	170.13	Fairbanks Church, Palmer (St. Clair), MI		60hp, high pressure	120'8" x 19'9" x 7'8" [125' x 18'6" x 7'3"; 121' x 20' x 8']	Foundered, Apr. 1839 (near Toledo, OH)	1; 2; 5; 6; 7 (163)
<i>Oswego (A*)</i>	1833	215 [286]	William Young, Oswego, NY	G.W. Bruen, Henry Fitzhugh	60hp crosshead, high pressure		Converted to sail, 1839; foundered, 1839	5; 7 (166)
<i>St. George(C*)</i>	1833		Mississauga, ON (?)		80hp, low pressure (William Avery, Syracuse, NY)	143' x 20'5" x 7'8"	Wrecked, 1846	5
<i>Thames (C*, aka Lady Colburne; Kent)</i>	1833	160; 180	Chatham, ON	Capt. H. Van Allen	High pressure	80' x 17' [122' L.]	Burned, Dec. 4, 1838; rebuilt/renamed, 1839; collided w/ steamer <i>London</i> , Aug. 12, 1845	1; 2; 5; 6
<i>Varenes (C*)</i>	1833				High pressure	140' x 23' x 7'6"		5

Vessel Name	Year Built	Tons	Builder	Owners	Engine Type	Dimensions	Remarks	Source
<i>Washington, George (C*)</i>	1833	605 [609; 600]	Aaron Root, Huron, OH	Huron Shipbuilding Co.	100hp, low pressure (Pittsburgh, PA)	180' x 29' [186' L.]	Grounded, Oct. 9, 1833 (Long Point)	1; 2; 4 (III:200); 5; 6; 7 (84)
<i>Webster, Daniel (A*)</i>	1833	358 10/95 [376; 338]	James Carrick, Black Rock, NY	William F.P. Taylor, et al	100 - 120hp crosshead, low pressure (Allaire Iron Works, New York, NY)	148'3" x 24' x 10' (1833); 148'10" x 24' x 11'2" (1836)	Burned, 1835; abandoned, 1843	1; 2; 3 (II:65); 4 (I:108); 5; 7 (51)
<i>Black Hawk (A*)</i>	1834	126 31/95 [200]	George S. Weeks, French Creek (Clayton), NY		80hp, high pressure	130' L.	Sold foreign	5; 7 (22)
<i>Crockett, Davy (A†, aka Colonel Crockett)</i>	1834	35	Griffith & Co., Erie, PA				Wrecked, Aug. 1836 (St. Joseph River)	5; 6; 7 (52)
<i>Delaware (A*, aka Delaware)</i>	1834	177.60 [178; 170]	J.S. Jackson, Huron, OH	Oliver Newberry, Richard Sears	80hp, high pressure	120'8" x 19'9" x 7'8" [105' x 25' x 7'6"]	Grounded, Jun. 19, 1836 (near Michigan City, IN)	1; 2; 5; 6; 7 (52)
<i>Enterprise (C*)</i>	1834	200	Kingston, ON				Converted to barge, 1836	5
<i>Grey, Alice (A*)</i>	1834	200	J.S. Jackson, Huron, OH	Jackson, Colt, & Co.	38hp, low pressure	131' x 21' x 7'4"	Wrecked, 1834	5
<i>Highlander (C*)</i>	1834	300	Coteau du Lac, ON		140hp, high pressure			5
<i>Jefferson, Thomas (A*)</i>	1834	428 68/95	S. Jenkins, Presque Isle (Erie), PA	Gen. C.M. Reed, et al	Low pressure		Converted to bark, 1837	1; 2; 5; 7 (211)
<i>Mazeppa (A*)</i>	1834	50.4 [130; 60]	James Carrick, Buffalo, NY		High pressure	75' x 13' x 5'6"	Converted to schooner, 1836	1; 2; 4 (II:169); 5; 7 (142)
<i>Minnesetunk (C*, aka Minnesetunk; Goderich)</i>	1834	200 [250; 150]	Canada Co. (Canada LL), Goderich, ON		45hp, low pressure		Collided w/ steamer <i>Erie</i> , July 1839; rebuilt/renamed, after 1839	1; 2; 5; 6

Vessel Name	Year Built	Tons	Builder	Owners	Engine Type	Dimensions	Remarks	Source
<i>Monroe, James</i> (A*)	1834	341 27/95	Fairbanks Church, Monroe, MI	Oliver Newberry, et al	130hp vertical walking beam, high pressure	144'7" x 26' x 9'8"	Lost, 1845 (Cattaraugus, NY)	1; 2; 5
<i>North American</i> (A*, aka <i>North America</i>)	1834	361 45/95	George W. Jones [Augustus Jones], Conneaut, OH	George W. Jones	180hp crosshead, low pressure	147'8" x 26' x 10' [148' x 26'6" x 10'1"]	Burned, Jan. 14, 1847 (Conneaut, OH)	1; 2; 5; 6; 7 (159)
<i>Perry, Oliver H.</i> (A*, aka <i>Commodore Perry</i>)	1834	352 [359]	Perrysburg, OH	Perrysberg Steam Boat Co.; John Hollister, et al	180hp, high pressure	150' x 48'	Boiler explosion, Jul. 21, 1835 (Buffalo, NY); abandoned, 1843	1; 2; 5; 6; 7 (160)
<i>Sandusky</i> (A*)	1834	377 [387]	Daniel Dibble, Sandusky, OH		50" x 9', 150hp crosshead, low pressure (Allaire Iron Works, New York, NY)	174' x 26'8" x 9'8" [150' x 27'6" x 9'6"]	Converted to bark, Oct. 10, 1843; converted to floating grain elevator, 1844	1; 2; 5; 7 (194)
<i>Townsend, Charles</i> (A*, aka <i>Dolphin</i>)	1834	312 58/95	Carrick & Bidwell, Buffalo, NY	Charles Townsend, George Coit	30hp, low pressure (Robert McQueen Works, Brooklyn, NY- from <i>Walk in the Water</i> , 1818, & <i>Superior</i> , 1822)	106' x 18' x 7' [135' x 40' x 8'6"]	Laid up, 1841; dismantled, 1849	1; 2; 3 (II:33); 4 (II:165); 5; 7 (33)
<i>Traveller</i> (C*)	1834	352	Niagara Harbour & Dock Co.; J. Ewing (carpenter), Niagara, ON	John Hamilton	Vertical beam engine, high pressure [low pressure] (Ward Eagle Foundry, Montreal, QC)	86'6" x 16' x 6' [137' x 22'5" x 10'4")	Converted to schooner, 1840	3 (III:321); 5
<i>Union</i> (C*)	1834	150	Oakville, ON		Two 44" x 84" vertical walking beam engines	145' x 23'6" x 11'	Dismantled, 1866	5
<i>Victory</i> (A*)	1834	77 67/95 [87]	James Carrick, Buffalo, NY	Horatio N. Holt, et al	40" x 48", 60 - 80hp crosshead, low pressure (Robert McQueen Works, Brooklyn, NY)	136' x 24' x 10' [121' or 131' x 28'1" x 11'15"]	Abandoned, 1839	1; 2; 3 (II:269); 5; 7 (221)
<i>Chicago</i> (A*)	1835	186 [166]	John Griffith & Co., St. Joseph, MI	John F. Wright, et al	High pressure (from <i>Enterprise</i> , 1826, or <i>William Peacock</i> , 1829)	105' x 20' x 9'6" [105' x 20' x 10']	Wrecked, Nov. 18, 1842 (near Silver Creek, NY); abandoned, 1846	1; 2; 5; 6; 7 (35)

Vessel Name	Year Built	Tons	Builder	Owners	Engine Type	Dimensions	Remarks	Source
<i>Columbus</i> (A*)	1835	391	Benjamin S. Goodsell, Huron, OH	Augustus Walker, et al	150hp, horizontal crosshead, high pressure (H.G. Olds & Co., Sandusky, OH)	131' x 28'1" x 11'7" [131' x 28' x 12']	Wrecked, Mar. 28, 1848 (Dunkirk, NY)	1; 2; 3 (III:93); 5; 6; 7 (42)
<i>Fulton, Robert</i> (A*)	1835	368 43/95 [308]	Seth W. Johnson [Fairbanks Church], Cleveland, OH	Giddings & Co.	90hp, high pressure (Slackhouse, Pittsburgh, PA)	139'8" x 26'6" x 10'8"	Wrecked, Oct. 1844 (off Dunkirk, NY); in service, 1858	1; 2; 5; 6; 7 (186)
<i>Pennetanguishene</i> (C*)	1835		Penetang, ON					5
<i>St. George</i> (C*)	1835	400	Kingston, ON		90hp, low pressure		Retired, 1857	5
<i>Taylor, William F.P.</i> (A*)	1835	95 36/95 [125]	Silver Creek, NY		High pressure	88' x 18' x 7'	Grounded, Oct. 2, 1838 (near Michigan City, IN); abandoned, 1840	1; 2; 5; 6; 7 (230)
<i>United States</i> (A*)	1835	366 80/95	George W. Church, Huron, OH [Buffalo, NY]	Harry Whitaker	28" x 84", 160hp vertical walking beam, high pressure (Warden & Berney, Pittsburgh, PA)	140' x 28'4" x 10' [135' x 40' x 8'6"]	Burned, Mar. 7, 1849 (Buffalo, NY)	1; 2; 3 (II:265); 5; 6; 7 (219)
<i>Wolfe</i> (C*, aka <i>Napanee</i>)	1835		Kingston, ON			80' x 13'	Burned, 1840 (Kingston, ON)	5; 6
<i>Bytown</i> (C*)	1836	123	Kingston, ON				Grounded, Oct. 25, 1837 (Kingston, ON)	5; 6
<i>Cataraqui</i> (C*)	1836	34 25/95	Ewen, Kingston, ON	Henry Gildersleeve, et al	Two 35hp engines (Ward Eagle Foundry, Montreal, QC)	133' x 38' x 8.9'	Burned, Apr. 1840 (Kingston, ON)	5; 6
<i>Charlevoix</i> (C*)	1836	310 [200]	Montreal, QC		65hp vertical walking beam	130' x 19'	Dismantled, 1863	5
<i>Cincinnati</i> (A*, aka <i>John F. Porter</i>)	1836	116	William A. Jones, Sandusky, OH	D.M. Barney	80hp, high pressure	88' x 20' x 7'2"	Converted to schooner, Apr. 25, 1840; foundered, Oct. 18, 1855 (near Milwaukee, WI)	1; 2; 5; 7 (36)

Vessel Name	Year Built	Tons	Builder	Owners	Engine Type	Dimensions	Remarks	Source
<i>Clinton, DeWitt</i> (A*)	1836	413 [493]	Fairbanks Church, Huron, OH	Sheldon Thompson, et al	90hp, high pressure	147' x 27'2" x 11'	Sank, May 1, 1851 (Dunkirk, NY); broken up, Jun. 16, 1869	1; 2; 5; 6; 7 (54)
<i>Crockett, David</i> (A*)	1836	18 30/95	L. Bird(s), et al, Brunersburgh, OH	J.E. Hunt	20hp, high pressure (Davis & Co.)	67' x 15' x 2'	Wrecked, 1844	1; 2; 5
<i>Don Quixote</i> (A*)	1836	51 27/95 [80]	Toledo, OH	L.M. Mills	High pressure	80'6" x 15'10" x 4'4" [81' x 16' x 4']	Wrecked, Jan. 14, 1837 (Thunder Bay Island, Lake Huron)	1; 2; 5; 6; 7 (56)
<i>Erie</i> (A*)	1836	497 [700]	M. Creamer, Erie, PA	Gen. Charles M. Reed, et al	52" x 120", 80hp vertical walking beam, low pressure	176' x 27' x 10'	Burned, Aug. 9, 1841 (near Silver Creek, NY)	1; 2; 3 (II:83); 4 (III:201); 5; 6; 7 (66)
<i>Erie</i> (A*, aka <i>Little Erie</i>)	1836	149 35/95	Fairbanks Church, Detroit, MI	John Ballard, et al	55hp vertical walking beam, low pressure	120'4" x 18' x 7'2"	Boiler explosion, Mar. 9, 1844 (Detroit, MI)	1; 2; 3 (IV:91); 5; 6; 7 (66)
<i>Gore</i> (C*)	1836	160	Thomas Dick, Niagara On The Lake, ON	Thomas Dick, Andrew Heron, Donald Bethune, James Lockhart		135' x 15'5" x 9'	Collided w/ brig <i>S.C. Walbridge</i> , Jul. 6, 1859 (St. Clair River); dismantled, 1861 (Detroit, MI)	5
<i>Highlander</i> (A*)	1836	400	Fairbanks Church, Huron, OH		Low pressure (Novelty Iron Works, New York, NY)			5
<i>Madison, James</i> (A*)	1836	630.56 [750]	Richards, Presque Isle (Erie), PA	Charles M. Reed	160hp, high pressure	178' x 30'9" x 12'3"	Grounded, Nov. 27, 1846 (Barcelona, Lake Erie)	1; 2; 4 (III:201); 5; 7 (109)

Vessel Name	Year Built	Tons	Builder	Owners	Engine Type	Dimensions	Remarks	Source
<i>Oneida</i> (A*)	1836	227	George S. Weeks, Oswego, NY		80hp	132' x 19' x 9'	Grounded, Nov. 19, 1842 (near Sackets Harbor, NY); converted to schooner, 1846	5; 6; 7 (163)
<i>Palmer, Julia</i> (A*)	1836	299 47/95 [300; 260]	John Carrick, Buffalo, NY	Col. Alanson Palmer	Vertical walking beam, low pressure	108'3" x 26' x 11'5"	Grounded, 1847 (off Whitefish Point, Lake Superior)	1; 2; 5; 6; 7 (118)
<i>Princess Victoria</i> (C*, aka <i>Barcelona</i>)	1836	102 42/95	Dunnville, ON		Low pressure	97' x 17'6" x 6'7"	Renamed, 1837; converted to schooner, May 13, 1839	1; 2; 5
<i>United States</i> (A*)	1836	37 48/95 [40]	Shadrack Jenkings, Detroit, MI	Lewis Davenport	High pressure	69'9" x 17' x 3'6"	Grounded, May 1844	1; 2; 5
<i>Badger</i> (A*)	1837	60	Samuel A. Hubble, Milwaukee, WI	Byron Kilbourn				5; 7 (17)
<i>Buffalo</i> (A*, aka <i>Manhattan</i>)	1837	613 [615]	John Carrick, Buffalo, NY	Charles M. Reed, et al	56" x 108", 200hp crosshead, low pressure (Allaire Iron Works, New York, NY)	189'5" x 28'2" x 12' [191' x 28'6" x 12'6"]	Grounded, Sep. 27, 1848 (Manitou Island, Lake Michigan)	1; 2; 3 (II:19); 4 (II:165); 5; 7 (26)
<i>Bunker Hill</i> (A*)	1837	457 29/95	F.N. Jones, Black River (Charleston), OH	Walter Joy & Co.	160hp crosshead, high pressure (Warden & Denney, Pittsburgh, PA)	154'4" x 28'4" x 11'6" [154' x 28' x 12']	Burned, Sep. 2, 1851 (Tonawanda, NY)	1; 3 (II:21); 5; 6; 7 (26)
<i>Burlington</i> (C*)	1837	150	Oakville, ON				Burned, Mar. 27, 1841 (Toronto, ON)	5; 6
<i>Cleveland</i> (A*)	1837	579 [580]	Fairbanks Church (or George Church), Huron, OH	Griffith, Beebe, Allen, & Co.	50" x 120", 225hp vertical walking beam, low pressure (West Point Foundry, Cold Spring, NY)	180' x 28'11" x 11'8"	Burned, May 1854 (Tonawana, NY)	1; 2; 3 (II:45); 5; 6; 7 (39)

Vessel Name	Year Built	Tons	Builder	Owners	Engine Type	Dimensions	Remarks	Source
<i>Commerce</i> (A*)	1837	78 69/95 [80]	Edward Wells, Sandusky, OH	W. Townsend & John H. Williams, et al	50hp, high pressure	174'8" x 17'6" x 6'9"	Laid up, 1850 or 1851 (Buffalo, NY)	1; 2; 5; 7 (43)
<i>Constellation</i> (A*)	1837	483 60/95	Edward Gillmore [F.N. Jones], Black River (Charleston), OH	Augustus Jones, et al [A.G.L. Cochrane, et al]	44" x 10', 120hp crosshead, low pressure (J. Birbeck & Co., New York, NY, 1824; rebuilt by Allaire Iron Works, New York, NY, 1837)	150'6" x 28'6" x 12'1"	Collided, w/ <i>Rough & Ready</i> , Jun. 8, 1847 (off Ashtabula, OH)	1; 2; 3 (II:57); 4 (III:202); 5; 7 (44)
<i>Constitution</i> (A*)	1837	443 52/95 [444; 440]	George W. Jones, Conneaut, OH [Charleston, OH]	Gillman Appleby, et al	130hp, high pressure	149' x 28'1" x 11'10" [141' x 28' x 12']	Sank, Jul. 24, 1847; abandoned, 1849	1; 2; 5; 6; 7 (45)
<i>Diamond</i> (A*)	1837	398	Troy, NY				Abandoned, 1847	5; 7 (54)
<i>Experiment</i> (C*)	1837	150	Niagara Harbour & Dock Co., Niagara, ON	James Lockhart	27.75" x 60" side lever, high pressure	98'x 14' x 7'	Lost or dismantled, circa 1859	1; 3 (VI:113); 5
<i>Governor Mason</i> (A*)	1837	53 27/95 [33]	R. Godfrey & Co., Grand Rapids, MI	William W. Danouse, et al	25hp, high pressure	84' x 15' x 4'6"	Grounded, May 3, 1840 (Muskegon River, MI)	1; 2; 5; 6; 7 (88)
<i>Illinois</i> (A*, †)	1837	755 [765; 756]	B.S. Goodsell [Charles Worth], Detroit, MI	Oliver Newberry	26" (56"?) x 120" crosshead direct-acting, low pressure [high pressure] (Allaire Iron Works, New York, NY)	200' (194' keel) x 30' (60' guards) x 13'	Converted to propeller, 1853; foundered, Sep. 13, 1868 (Port Austin, MI)	1; 2; 3 (VI:143);4 (III:201); 5; 7 (100)
<i>Macomb</i> (A*)	1837	101.77 [104; 100]	William E. Dixon, Mt. Clemens, MI	Weeks, Allen, et al	High pressure	91'6" x 17'6" x 6'9"	Converted to schooner or tug, 1845	1; 2; 5; 7 (133)
<i>Milwaukie</i> (A*, aka <i>Milwaukee</i>)	1837	401 [400]	Peter Hotaling [B.F. Delano], Grand Island (White Haven), NY	William Kimball	126" str., 112hp vertical walking beam, low pressure (West Point Foundry, Cold Spring, NY)	172' x 24' x 10' [165' x 26']	Grounded, Nov. 17, 1842; dismantled, 1849	1; 2; 5; 6; 7 (145)

Vessel Name	Year Built	Tons	Builder	Owners	Engine Type	Dimensions	Remarks	Source
<i>New England</i> (A*)	1837	416.24 [450]	Bidwell & Banta; J. Banta (carpenter), Black Rock, NY [Buffalo, NY]	Robert Gillespie, et al	60hp crosshead, low pressure (Allaire Iron Works, New York, NY)	148'8" x 26'3" x 11'4" [165' x 26']	Abandoned, 1848 (Buffalo Creek, NY)	1; 2; 3 (VI:213); 4 (II:169); 5; 7 (155)
<i>Peel, Sir Robert</i> (C*)	1837	350	Brockville, ON			160' x 30'	Burned, May 1838 (near Wellesley Island, NY)	5
<i>Queen Victoria</i> (C*)	1837	200	Niagara Harbour & Dock Co.; Robert Gilkisos (carpenter), Niagara, ON	James Lockhart	27.75" x 72" side lever	130' x 19'6" x 7'3"	Wrecked, Oct. 16, 1851 (Niagara River)	3 (VI:263); 5; 6
<i>Rhode Island</i> (A*)	1837	164	Sandusky, OH [Detroit, MI]		High pressure		Lost, 1850	1; 2; 7 (185)
<i>Saginaw</i> (A*, aka <i>Rhode Island</i> ; <i>St. Clair</i>)	1837	150 [250]	W. A. Jones or G.R. McKenzie, Sandusky, OH		Crosshead (Camp & Johnson, Sandusky, OH)	116.5' x 17.5' x 8.83' (1838); 140' x 19.08' x 7.75' (1843)	Rebuilt/renamed multiple times; collided w/ <i>Red Jacket</i> , Nov. 13, 1846 (Port Huron, MI)	2; 5
<i>Star</i> (A*)	1837	128 62/95 [138; 129]	Belvidere, MI	Thomas H. Peck, et al	45hp, high pressure	108' x 18' x 7'	Burned, Feb. 1845 (Buffalo, NY)	1; 2; 5; 6; 7 (202)
<i>Telegraph</i> (A*)	1837	196	A. Sprague, Dexter, NY		38hp, low pressure	131' x 18'9" x 8'4"	Burned, 1852; converted to schooner, 1852; abandoned, 1853	5; 6; 7 (209)
<i>Washington, George</i> (A*)	1837	380 [480; 308]	J.D. Hulbert [Capt. Savage], Ashtabula, OH	Henry Hubbard, et al	Two 100hp engines, high pressure	160' x 29' x 8'	Burned, Jun. 16, 1838 (off Silver Creek, Lake Erie)	1; 2; 5; 6

Vessel Name	Year Built	Tons	Builder	Owners	Engine Type	Dimensions	Remarks	Source
<i>Wayne, Anthony</i> (A*, aka <i>General Wayne</i> ; <i>Mad Anthony</i>)	1837	390 46/95; 400	Samuel L. Hubblell, Perrysburg, OH (1837); D.W. Donahue, Trenton, MI (1849)	Perrysburg & Miami Steamship Co.; John H. Hollister, et al (1837); Charles B. Howard (1848)	27" x 36", 120hp square, high pressure (1837- Hathaway & Co.); Horizontal (1848- from <i>Columbus</i>)	156'6" x 25'9" x 10'10" (1837); 155' x 27'4" x 10'3" (1848)	Boiler explosion, Apr. 28, 1850 (off Vermilion, OH)	1; 2; 3 (II:99); 4 (III:202); 5; 6; 7 (11)
<i>Wisconsin</i> (A*)	1837	490 [887; 700]	George W. Jones, Conneaut, OH	James C. Evans, et al	60 x 108", 385hp crosshead, high pressure [low pressure] (J. Birbeck & Co., New York, NY, 1825)	157' x 29' x 11'6" [218'8" x 30' x 14']	Rebuilt, 1844; collided w/ steamer <i>Brunswick</i> , Aug. 24, 1853 (West Sister Island, Lake Erie)	1; 2; 3 (II:285); 5; 6; 7 (234)
<i>Allen, James</i> (A*)	1838	213 [258; 162]	Calvin Case, Chicago, IL	Newberry, Dole, et al	Two 40hp engines, low pressure (G.W. Stone & Co., Chicago, IL)	133' x 21' x 8'7"	Dismantled, 1845	1; 2; 5; 7 (108)
<i>Chesapeake</i> (A*)	1838	412 49/95	David R. Stebbins; F.N. Jones (carpenter), Maumee City, OH	Jesse Smith, et al	120hp engine vertical walking beam, low pressure (St. Mary's Foundry, Montreal, QC)	172' x 24'5" x 10'1" [191' x 28'6" x 12'6"]	Collided w/ schooner <i>John Porter</i> , Jun. 9, 1847 (off Conneaut, OH)	1; 2; 3 (II:35); 5; 6; 7 (35)
<i>Dole, George W.</i> (A*)	1838	162 22/95	Calvin Case, Chicago, IL	Michigan Lake Steamboat Co.; Newberry, Dole, et al	Vertical walking beam, high pressure	125' x 18' x 7'5"	Sank, 1856 (Buffalo, NY)	1; 2; 5; 7 (84)
<i>Fairport</i> (A*, aka <i>Tecumseh</i>)	1838	285 66/95; [259]	George W. Jones; A.B. Herrick (carpenter), Fairport (Algonac), OH	Alvah Carble, James Blair, Robert Harper	60hp, high pressure [low pressure]	135'3" x 22'9" x 9'6" [135'9" x 22'4" x 9']	Rebuilt/renamed, 1845; grounded, Nov. 15, 1850 (above Buffalo Light, NY)	1; 2; 5; 6; 7 (69)
<i>Generall Vance</i> (A*)	1838	76 [100; 75]	Samuel Hubbell, Amos Pratt, Perrysburg, OH	J. Smith, et al	High pressure	90' x 14' x 7'	Boiler explosion, Jun. 25, 1844 (Windsor, ON)	1; 2; 5; 6; 7 (82)

Vessel Name	Year Built	Tons	Builder	Owners	Engine Type	Dimensions	Remarks	Source
<i>Great Western</i> (A*)	1838	780	G.S. Goodsell [George Church], Huron, MI	Augustus Walker, et al	30" x 120", 300hp horizontal, high pressure (Pittsburgh, PA)	183' x 34'4" x 13' [186' x 34' x 13']	Burned, Sep. 1, 1839 (Detroit, MI); dismantled, 1855 (Tonawanda, NY)	1; 2; 3 (II:107); 5; 6; 7 (89)
<i>Hunter</i> (C*, aka <i>Perth</i> , <i>Hercules</i>)	1838	118.53	Prescott, ON	Ottawa & Rideau Forwarding Co.	(Maudslay & Sons, London, ENG)	104' x 16'7" x 7'2"	Retired, 1864	5
<i>Lawrence</i> (A*)	1838	300	George W. Jones, Fairport, OH [Buffalo, NY]					5; 7 (125)
<i>Lexington</i> (A*)	1838	363 53/95 [353]	Augustus Jones [F.N. Jones], Black River (Charleston), OH	F.N. Jones	80hp direct-acting engine, low pressure (Shepard Iron Works, Buffalo, NY- from <i>Uncle Sam</i> , 1832)	152' x 22'6" x 11'11" [162' x 23' x 11']	Stranded, Jun. 15; 1850 (Port Washington, WI) [Grounded, Sep. 2, 1851 (near Grand River, ON)]	1; 2; 5; 6; 7 (127)
<i>Menominee</i> (A*)	1838	75	Milwaukee, WI					5
<i>Osceola</i> (A*)	1838		John English, Grand Island (White Haven), NY	Boston Timber Co.		100' L.		4 (II:170)
<i>Owashtanunk</i> (A*) (aka <i>Owashenonk</i> ; <i>Owadenonk</i>)	1838	45.53	Grand Haven, MI		High pressure	101'4" x 17'6" x 8'10"	Abandoned, 1840	1; 2; 5; 7 (166)
<i>Patronage</i> (A*)	1838	56 28/95	Hull & Co., St. Joseph, MI		High pressure (from <i>Davy Crockett</i> , 1835)		Abandoned, 1841	1; 2; 5; 7 (168)
<i>Red Jacket</i> (A‡, aka <i>Oliver M.</i> <i>Hyde</i>)	1838	148 20/95	John Englis, White Haven, NY [Grand Haven, NY]	John H. Lathrop, et al	25hp, low pressure (West Point Foundry, Cold Spring, NY)	110' x 16' x 8'	Rebuilt/renamed, 1853; abandoned, 1857	1; 2; 5; 7 (182)
<i>Rochester</i> (A*)	1838	472 41/95	Jared Lockwood, A. Jones, Richmond City (Fairport), OH	J. Goodman	190hp crosshead, high pressure (S. Hathaway, Cleveland, OH)	158'5" x 27'6" x 11'6" or 7'6"	Converted to sail vessel, 1862; wrecked, 1872 (near Girard, PA)	1; 2; 5; 7 (187)

Vessel Name	Year Built	Tons	Builder	Owners	Engine Type	Dimensions	Remarks	Source
<i>Trowbridge, C.C.</i> (A†)	1838	42 72/95 [52; 30]	McLaughlin; William Wilkin (carpenter), Saugatuck, MI [Kalamzao, MI; Detroit, MI]	Osha Wilder, et al	High pressure	73' x 16' x 4'6"	Stranded, Dec. 5, 1842; broken up, 1871 (Milwaukee, WI)	1; 2; 5; 6; 7 (27)
<i>Vermillion</i> (A*, aka <i>New Orleans</i>)	1838	385; 610	Benjamin S. Goodsell, Vermillion, OH; Detroit, MI	James C. Evans (1838); Samuel F. Gelston, et al (1844)	Horizontal, high pressure (1838); crosshead (1848- Buffalo Steam Engine Works, Buffalo, NY)	151'8" x 25'6" 10'6"; 185'4" x 26'8" x 12'10"	Burned, Nov. 8, 1842; rebuilt/renamed, 1844; grounded, Jun. 11, 1849 (Thunder Bay, MI)	1; 2; 3 (II:159); 5; 6; 7 (220)
<i>Wabash</i> (A*)	1838	83.24 [84]	Samuel Hubbell, Amos Pratt, Perrysburg, OH	William Earl, et al	65hp, high pressure (Wilkinson & Son)	100' x 14' x 6'2"	Abandoned, 1840	1; 2; 5; 7 (224)
<i>Brothers</i> (C*, aka <i>Three Brothers</i>)	1839	150 [100]	W. Eberts, Chatham, ON	W. Eberts	High pressure		Sunk, May 1856 (River Thames, ON)	1; 2; 5; 6
<i>Chautauque</i> (A*)	1839	204 49/95 [200; 161]	Jacob W. Banta, Buffalo, NY		Low pressure	153'6" x 18'2" x 7'6" [124' x 18' x 8']	Burned, Aug. 9, 1850 (St. Clair River); abandoned, 1851	1; 2; 5; 6; 7 (34)
<i>City of Toronto</i> (C*, aka <i>Racine</i> ; <i>Algoma</i>)	1839	416 gross [349; 624]	Niagara Harbour & Dock Co.; James Ewing, Niagara, ON	Royal Mail Line of Ontario; John Hamilton	Two 46" x 144" vertical walking beam engines (Ward Eagle Foundry, Montreal, QC)	147' x 23' x 12' [163' x 22'1" x 11']	Rebuilt, 1863; dismantled, 1888	3 (II:39; V:59); 5; 6
<i>Erin</i> (C*)	1839	78 45/95	William Parkin, Brockville, ON	James Douglas		92' x 15'2" x 5'5"	Dismantled, 1850	5
<i>Express</i> (A*)	1839	139 34/95	Horatio N. Throop, Pultneyville, NY			103'6" x 17'5" 8'2"	Abandoned, 1848; dismantled, 1850	5; 7 (69)
<i>General Scott</i> (A*)	1839	200 40/95 [240]	Fairbanks Church, Huron, OH	Grillet & Desnoyer, et al	High pressure	131' x 20' x 8'	Collided w/ schooner <i>Star</i> , Oct. 1848 (Lake St. Clair)	1; 2; 5; 6; 7 (82)

Vessel Name	Year Built	Tons	Builder	Owners	Engine Type	Dimensions	Remarks	Source
<i>Gildersleeve, Henry (C*)</i>	1839	111	George Thurston, Kingston, ON	O.S. Gildersleeve	Vertical walking beam	140' L.	Collided w/ schooner <i>Babinean & Gandier</i> , Jun. 1874 (St. Clair River); dismantled, 1874	5
<i>Harrison (A*, aka General Harrison)</i>	1839	63	Presque Isle (Erie), PA		High pressure		Abandoned, 1869	1; 2; 7 (80)
<i>Huron (A*)</i>	1839	147 4/95 [348; 140]	John Gallagher, Newport (Marine City), MI	Samuel Ward, et al	Vertical walking beam, high pressure (Detroit Iron Co., Detroit, MI)	117'6" x 15'8" x 8'3"	Dismantled, 1849	1; 2; 5; 6; 7 (99)
<i>Marshall, John (A*)</i>	1839	70 [108; 53; 51]	Samuel L. Hubbell, Perrysburg, OH	Adolphus Kreamer, et al	High pressure	98' x 16' x 8' [75' x 16' x 4'8"]	Rebuilt, 1842; grounded, Oct. 18, 1844; abandoned, 1845	1; 2; 5; 6; 7 (114)
<i>Olive Branch (A*)</i>	1839	29	Sag Harbor, NY				Abandoned, 1841	5; 7 (163)
<i>Ontario (C*, aka Lord Sydenham; Montreal)</i>	1839	325	Lonson Hillard, Prescott, ON	John Hamilton	(Niagara Harbour & Dock Co.)	197' x 25' x 9'	Broken up, 1863	5
<i>St. Lawrence (A*)</i>	1839	401.61 [433.8]	George S. Weeks, Oswego, NY	H. Fitzhugh, Gariet Smith, Russelear	Two horizontal engines, low pressure (William Avery, Syracuse, NY - from Oswego, 1833)	180' x 23' x 11' [184'9" x 22'3" x 10'10"]	Rebuilt, 1844; abandoned, 1850; dismantled, 1854	3 (II:231); 5; 7 (191)
<i>Wilmington (A*)</i>	1839	405	Baltimore, MD		130hp [41" x 120", 200hp]	170' x 22' [184' x 46'8" 8']	Sold foreign, 1854; rebuilt, 1856; dismantled, 1877	5; 7 (233)
<i>Beaver (C*)</i>	1840	118	Kingston, ON	McPherson, Crane, & Co.		104' x 16'7" x 7'2"		5
<i>Canada (C*)</i>	1840	127	Prescott, ON		65hp horizontal, low pressure	159' x 20' x 8'	Broken up, 1858	5

Vessel Name	Year Built	Tons	Builder	Owners	Engine Type	Dimensions	Remarks	Source
<i>Ericson</i> (C*)	1840	61.4	William Parkin, Brockville, ON	Sanderson & Murray	15hp, low pressure	87' x 16'4" x 5'5"	Broken up, 1866	5
<i>Harrison, William H.</i> (A*, aka <i>General Harrison</i>)	1840	326 [362; 325]	Samuel S. Stebbins Shipyard; Francis N. Jones (carpenter), Maumee City, OH	James Wolcott	Vertical walking beam, high pressure	154' x 22' x 10'	Grounded, Jul. 1851 (off Chicago, IL); abandoned, Aug. 1851	1; 2; 3 (V:303); 5; 6; 7 (231)
<i>Highlander</i> (C*)	1840	250	Montreal, QC				Rebuilt, 1846	5
<i>Minos, HMS</i> (C*)	1840	400	Chippewa, ON	Canadian Navy	Two 26" x 54", 45hp side lever engines, low pressure	148' L.	Dismantled, after 1853	1; 5
<i>Missouri</i> (A*)	1840	612.01	Benjamin S. Goodsell, Vermillion, OH [Erie, PA]	Reed Line	30" x 120" side lever, high pressure (later used in <i>A.D.Patchin</i> , 1846)	180' x 28'8" x 12'55"	Abandoned, 1850 (Erie, PA)	1; 2; 5; 6; 7 (147)
<i>Niagara</i> (C*, aka <i>Sovereign</i>)	1840	475	Niagara Harbour & Dock Co., Niagara, ON	John Hamilton	Vertical walking beam (Niagara Harbour & Dock Co.)	158' x 23'6" x 11'	Dismantled, 1859	3 (III:251); 5
<i>Ottawa</i> (C*)	1840	57	Trois Rivieres, QC			82' x 19'	Collided w/ vessel, Sep. 1851 (near Kingston, ON)	5; 6
<i>Porcupine</i> (C*)	1840	56	Prescott, ON				Burned, 1855	5
<i>Prince Edward</i> (C*, aka <i>City of Kingston</i>)	1840	150	Delano Dexter Calvin & Herman Cook, Garden Island, ON	Henry Gildersleeve		122'7" x 15'5" x 8'9"		5
<i>Queen</i> (C*)	1840		Sorel, QC			208' x 26' [235' x 26']	Rebuilt, 1843; broken up, 1863	5
<i>Raftsmen</i> (C*)	1840	60	Delano Dexter Calvin, Garden Island, ON	Dexter D. Calvin & Co.	Vertical walking beam	100' x 22' x 7'	Converted to propeller, 1875; dismantled, 1935	5
<i>Waterloo</i> (A*)	1840	98 42/95 [141; 100]	Black Rock, NY	John Fellows, et al	Low pressure (partly from <i>Superior</i> , 1822)	91'6.5" x 18'4" x 6'4" [126' x 18' x 6']	Burned, Oct. 17, 1849 (Black Creek, ON)	1; 2; 5; 6

Vessel Name	Year Built	Tons	Builder	Owners	Engine Type	Dimensions	Remarks	Source
<i>America</i> (C*)	1841	238	Jason Ewing, Niagara, ON	Bethune	60hp vertical walking beam	141' x 19' x 9'	Sank, 1874 (off Kingston, ON)	5; 6
<i>Baron Toronto</i> (C†)	1841		Nelson Walker, Montreal, QC	Sanderson & Murray	Ericsson patent engine (Nelson Walker)			5
<i>Clinton, George</i> (A*)	1841	103 47/95 [104]	J.D. Beaupre, Oswego, NY	Jabez N. Gilbert, L.B. Littlefield		94'9" x 15'6" x 7'4"	Grounded, Sept. 13, 1851 (near Genessee, NY)	5; 6; 7 (83)
<i>Frontenac</i> (C*)	1841	200	Kingston, ON				Broken up, after 1844	5
<i>Grenville</i> (C*)	1841	108.42	George S. Weeks, Prescott, ON			93'6" x 11' x 6'	Broken up, 1872	5
<i>Indiana</i> (A*, aka <i>Toledo</i>)	1841	534 [434]	Keating & Church, Toledo, OH		48" x 84" or 49" x 91" vertical walking beam, low pressure	175' x 26' x 12' [174' x 26' x 12']	Burned, Nov. 30, 1848 (off Conneaut, OH)	1; 2; 5; 6; 7 (101)
<i>Meteor</i> (C†)	1841	57.082	Montreal, QC	McPherson, Crane, & Co.		85'7" x 16'6" x 5'4"		5
<i>Montreal</i> (C*)	1841	378.55	Thomas Boyd, Montreal, QC	Tow Boat Co. & St. Lawrence Steam Boat Co.	57" x 120" (St. Mary's Foundry, Montreal, QC)	247'5" x 25'4" x 9'7"	Wrecked, 1853	5
<i>North America</i> (C*, aka <i>Malakoff</i>)	1841	181	Edward D. Merritt, Montreal, QC	Allan Gilmore		171'8" x 27'9" x 9'7"		5
<i>Odd Fellow</i> (A*)	1841	8	Buffalo, NY	William Baker	High pressure		Grounded, Nov. 6, 1841 (Gravelly Bay)	1; 5; 6
<i>Oldfield</i> (C†)	1841	74.22	G.J. Weeks, Prescott, ON	Sir George Simpson, et al		104' x 17'2" x 8'4"		5
<i>Ontario</i> (C*)	1841	98	McCarty, Sorel, QC			105' x 18' x 8'	Dismantled, 1856	5
<i>Pioneer</i> (C*)	1841	52.26	Thomas Dissett, Prescott, ON			93'6" x 13'6" x 6'9"		5
<i>Princess Royal</i> (C*, aka <i>West Point, Nellie Pentz</i>)	1841	243; 828	Niagara Harbour & Dock Co., Niagara, ON	David Bethune	Two vertical walking beam engines	168'8" x 21'2" x 11'5"	Rebuilt 1853, 1859; sank 1865	3 (IV:261); 5
<i>Propeller</i> (C†)	1841	34.032	William Parkin, Brockville, ON	Tobin, Mursion, & Sanderson		90'5" x 14'2" x 5'5"	Retired, 1866	5

Vessel Name	Year Built	Tons	Builder	Owners	Engine Type	Dimensions	Remarks	Source
<i>St. David</i> (C*)	1841		William Parkin, Brockville, ON	H. & S. Jones	Two 15hp engines, high pressure (New York State Prison, Auburn, NY)		Pollywog style steamer (Steamboat Connections-Mackey)	5
<i>Union</i> (C†)	1841		John Ericsson, Brockville, ON	Canadian Government		97' x 17'		5
<i>Vandalia</i> (A†, aka <i>Milwaukee</i>)	1841	138.2 [248; 150]	Sylvester Doolittle [Bronson & Crocker], Oswego, NY	Sylvester Doolittle, et al	14" x 28", 50hp vertical direct-acting, high pressure (C.C. Dennis, Auburn, NY)	91' x 20'2" X 8'3" [127' x 20' x 8']	Sold foreign, 1850; rebuilt/renamed, 1856; collided w/ vessel, 1859 (Straits of Mackinac)	1; 3 (II:267); 5; 6; 7 (220)
<i>Waterman, D.W.</i> (A*)	1841	8	Buffalo, NY		High pressure			1
<i>Administrator</i> (C*)	1842	400						5
<i>Bytown</i> (C*)	1842	34	Montreal, QC			92' x 17' x 5'8"	Broken up, 1872	5
<i>Charlotte</i> (C*, aka <i>Montreal</i>)	1842	67 [131]	William Ross, Montreal, QC			90' x 17'5" x 6' 106'6" x 17'4" x 7'5"	Rebuilt, 1861	5
<i>Cherokee, HMS</i> (C*)	1842	343 16/35	Kingston Dockyard; John Counter (carpenter), Kingston, ON	Canadian Navy	200hp	167'3" x 28'6" x 16'3"		5
<i>Chicago</i> (A†)	1842	151 7/95 [150]	Sylvester Doolittle, Oswego, NY	Oswego Forwarding Co.	Ericsson patent engine	95'x 20'2" x 8'7"	Burned, Aug. 1, 1849 (Buffalo, NY)	1; 5; 6; 7 (35)
<i>Chief Justice Robinson</i> (C*)	1842	275 [316]	Niagara Harbour & Dock Co., Niagara, ON	Capt. Hugh Richardson	80hp vertical walking beam (later used in <i>Ark</i> , 1853)	160' L.	Seized at Lewiston, NY, 1849; laid up, 1857	3 (II:37; VI:53); 5
<i>Chippewa</i> (C*)	1842	700	Tucker (carpenter), Kingston, ON					5
<i>Clinton, George W.</i> (A*)	1842	19	Black Rock, NY		High pressure			1

Vessel Name	Year Built	Tons	Builder	Owners	Engine Type	Dimensions	Remarks	Source
<i>Despatch</i> (C*)	1842	186 [225]	Hamilton, ON			144' x 19' x 8'6"	Sank, Jun. 1859 (Chatham, ON)	5; 6
<i>Erie</i> (C*)	1842	92.16	Augustin Cantin, Montreal, QC			92' x 17'5" x 7'5"	Rebuilt 1850; dismantled 1867	5
<i>Franklin, Benjamin</i> (A*)	1842	231 28/95 [234]	Gilman Appleby, Buffalo, NY [St. Clair, MI]	Gilman Appleby, Stephen Clark, Hiram Burton	High pressure	135' x 19'10" x 9'	Wrecked, Oct. 8, 1850 (Thunder Bay, Lake Huron)	1; 2; 5; 6; 7 (21)
<i>Juno</i> (C†)	1842	57.28	Duncan Sinclair, Montreal, QC	McPherson, Crane, & Co.	Walker's patent propellers	87'1" x 16'7" x 5'5"	Sank, 1873	5
<i>Lady of the Lake</i> (A*) (aka <i>Queen City</i>)	1842	422 78/95 [425; 423]	George S. Weeks, Oswego, NY	Ontario Steam & Canal Boat Co.	100hp crosshead, low pressure (Allaire or Allen Works, New York, NY)	197' x 24' x 9'2"	Sold foreign, 1854; burned, Jan. 22, 1855 (Toronto, ON)	3 (V:161); 5; 6; 7 (124)
<i>Lord Stanley</i> (C*)	1842	61.85	Montreal, QC	James Gilmour		88'5" x 17'5" x 6'3"		5
<i>Oswego</i> (A†, aka <i>Roman</i>)	1842	151.07 [150]	Sylvester Doolittle, Rochester, NY	Sylvester Doolittle, et al	Ericsson patent engine	95' x 20'2" x 8'7"	Foundered, 1853 or 1858	1; 5; 7 (166)
<i>Precursor</i> (C†)	1842	95	Collins, Cobourg, ON	Kittson		88' x 18'8"		5
<i>President</i> (A*)	1842	68.8 [69]	Texas, NY	Ruel Irons		76'3" x 14'5" x 6'8.5"	Grounded, 1850 (Lake Ontario)	5; 6; 7 (177)
<i>Prince of Wales</i> (C*)	1842	200	Kingston Marine Railway Co., Kingston, ON	John Hamilton	Two vertical walking beam engines (from <i>Sir James Kempt</i> , 1829)	135' x 20' x 6'		3 (VI:257); 5
<i>Rochester</i> (A*, aka <i>Sir Charles Napier</i>)	1842	354 30/95	George S. Weeks, Oswego, NY	Ontario Steam & Canal Boat Co.	75 - 100hp vertical walking beam	166' x 22' x 10'	Dismantled, 1866	5; 7 (187)
<i>Roy, Rob</i> (C*)	1842	34	Augustin Cantin, Montreal, QC		16" x 48" (W. Parkyn, Montreal, QC)	90' x 12' x 5'		5
<i>Shamrock</i> (C*)	1842		Niagara Harbour & Dock Co., Niagara, ON	Atkinson, Matthe & Co.	High pressure		Boiler explosion, Jul. 11, 1842 (near Lachine, QC)	5

Vessel Name	Year Built	Tons	Builder	Owners	Engine Type	Dimensions	Remarks	Source
<i>Swallow</i> (C*)	1842	25 115/3500 [29 75/94]	P.C. Delatre, Niagara, ON	Francis Clemow		91.6' x 10'9" x 5'2"		5
<i>Union</i> (A*)	1842	62 34/95 [64; 34]	Bidwell & Banta; Jacob W. Banta (carpenter), Black Rock, NY	Absolom Bull	High pressure	79'9" x 14'6" x 5'9"	Lost or abandoned, 1856	1; 2; 5; 7 (217)
<i>Abwell</i> (C*)	1843		Hamilton, ON				Possibly burned, mid 1850s	5
<i>Admiral</i> (C*)	1843	288	Niagara Harbour & Dock Co., Niagara, ON	D. Bethune	42 x 96", 14hp, low pressure (Niagara Harbour & Dock Co.)	156' x 21' x 10'	Converted to bark, 1862	5
<i>Adventure</i> (C†, aka <i>Adventurer</i>)	1843	112	Niagara Harbour & Dock Co., Niagara, ON	James A. Glassford, et al		90'1" x 17'4" x 6'	Dismantled, 1862	5
<i>Beagle</i> (C†)	1843	95	Niagara, ON			90' x 17'	Wrecked, Oct. 10, 1849 (near Port Hope, ON)	5; 6
<i>Brantford</i> (C*)	1843		Dunnville, ON					5
<i>Champion</i> (A*)	1843	266 65/95 [270]	Joseph M. Keating; Fairbanks Church (carpenter), Newport, MI	Samuel & Eber B. Ward	31" x 96" horizontal, low pressure (Novelty Iron Works, New York, NY)	145'6" x 20' x 9'6"	Abandoned, 1845; broken up, 1851	1; 2; 5; 7 (32)
<i>City of Kingston</i> (C*)	1843	400	Kingston, ON					5
<i>Commerce</i> (C*, aka <i>Elipse</i> ; <i>Laura E. Calvin</i>)	1843	275	Niagara Harbour & Dock Co., Niagara, ON	James Sutherland	54" x 132" vertical walking beam (Niagara Harbour & Dock Co.)	140' x 21'8"x 7'6"	Converted to bark, 1863	3 (IV:51); 5
<i>Emigrant</i> (A†)	1843	249 94/95 [275]	George W. Jones, Cleveland, OH	Sheldon Pease, William F. Allen, Abner Stone	16" x 28", 70hp (Cuyahoga Steam Furnance Co., Cleveland, OH)	117'10" x 25'6" x 9'1"	Grounded, 1845	1; 5; 7 (63)

Vessel Name	Year Built	Tons	Builder	Owners	Engine Type	Dimensions	Remarks	Source
<i>Hercules</i> (A†)	1843	256 39/95 [275]	Carrick & Bidwell; Jacob W. Bidwell (carpenter), Buffalo, NY	Robert Hollister	50hp Ericsson patent engine, high pressure (New York State Prison, Auburn, NY)	136'3" x 24'10" x 8'1"	Collided w/ propeller <i>Clarion</i> , Jun. 6, 1883 (Algonac, MI)	1; 5; 7 (95)
<i>Independence</i> (A†)	1843	261 2/95 [264; 262]	James M. Averill, Chicago, IL	R.C. Bristol, et al	Two rotary engines	118'4.5" x 23'3.5" x 9'6.5"	Boiler explosion, Nov. 22, 1853 (Sault Ste. Marie, MI); dismantled, 1854	1; 5; 6; 7 (101)
<i>London</i> (C†)	1843	150	Cobourg, ON	Woodward & Hutchison	25hp Ericsson patent engine		Lost, 1858	5
<i>Mohawk</i> (C*)	1843	150 [174]	Kingston Dockyard, Kingston, ON		Two 60 - 80hp inclined compound engines	99' x 19'6" x 9'10"		5
<i>New York</i> (A†)	1843	152 18/95 [150]	Porter Barton & Co., Oswego, NY	Sylvester Doolittle, et al	Ericsson patent engine	96' x 23'3" x 8'6"	Abandoned, 1850	1; 5; 7 (156)
<i>Nile</i> (A*)	1843	642 64/95 [650; 600]	B.F. Goodsell [Oliver Newberry], Detroit, MI	Oliver Newberry	44" x 120" vertical walking beam, low pressure (West Point Foundry, Cold Spring, NY- from <i>Mikwaukee</i> , 1841)	183' x 26'9" x 13'8"	Burned, Sep. 5, 1850 (Milwaukee, WI)	1; 2; 3 (II:165); 5; 6; 7 (158)
<i>Paragon</i> (A*)	1843	41 60/95	Grand Rapids, MI				Abandoned, 1848	1; 5; 7 (168)
<i>Pocahontas</i> (A*)	1843		Wheeler & Porter, St. Joseph, MI			125' x 28'		5
<i>Prince Albert</i> (C*)	1843	292	William Perkins, Montreal, QC			175' x 25'		5
<i>Samson</i> (A†, aka <i>Sampson</i>)	1843	250	Capt. Amos Pratt, Perrysburg, OH	Robert & John Hollister, Capt. Amos Pratt, et al		134' x 25' x 8'	Foundered, Nov. 12, 1852 (Buffalo, NY); burned, Nov. 29, 1875 (Cleveland, OH)	1; 5; 6; 7 (193)
<i>St. Clair</i> (A*)	1843	250 [210]	Detroit, MI		High pressure	140' x 19' x 8'	Lost, Aug. 5, 1850	1; 6; 7 (190)

Vessel Name	Year Built	Tons	Builder	Owners	Engine Type	Dimensions	Remarks	Source
<i>Abert, USS</i> (A*, aka <i>Col. Abert</i> , <i>Alert</i> , <i>Surveyor</i>)	1844	133 [433]	Novelty Ironworks, Buffalo, NY	U.S. Topographical Engineers	Two 16" x 26" engines, high pressure [low pressure]	97' x 18'5" x 8'	Abandoned, Oct. 26, 1888	1; 2; 5
<i>Belle, Heather</i> (C†)	1844		Louis Shickluna, St. Catherines, ON				Retired, after 1871	5
<i>Belmont</i> (C*)	1844		William Perkins, Montreal, QC					5
<i>Emerald</i> (C*)	1844	216 [316; 250; 96]	Niagara Harbour & Dock Co., Chippewa, ON	J. Macklem	50 or 75hp vertical walking beam, low pressure (Macklem Iron Works, Chippewa, ON)	132' x 20' x 8'8"	Stranded, Dec. 2, 1858 (Lake St. Clair)	1; 2; 3 (III:119); 5; 6
<i>Empire</i> (A*)	1844	1140 72/95 [1136]	George W. Jones, Cleveland, OH	American Transportation Co.; D.N Barney, et al	Two 35" x 120", 600hp inclined compound engines, high pressure [low pressure] (Cuyahoga Steam Furnance Co., Cleveland, OH)	253'6" x 32'8.5" x 14'2"	Stranded, Nov. 16, 1870 (near Port Rowan, ON)	1; 2; 3 (II:75); 5; 6; 7 (64)
<i>Fire Fly</i> (C*, aka <i>Mouche A' Feu</i>)	1844	45.23	William Parkin, Montreal, QC	Robert Holmes		108'3" x 17'9" x 6'2"	Rebuilt several times; broken up, Dec. 30, 1910	5
<i>Hill, Rowland</i> (C*)	1844	484	Black, P. Brunel, Quebec, QC		Two 40" x 120" engines (one from <i>Charlevoix</i> , 1836)	167' x 18' x 8'		5
<i>Huron</i> (C*)	1844	83	Montreal, QC			93' x 6'	Dismantled, 1851	5
<i>Indian Queen</i> (A*)	1844	112 5/95	Bidwell & Banta; Jacob W. Banta (carpenter), Buffalo, NY	Sylvester Staring, Richard Liddle	45hp, high pressure (Fulton Iron Works, NY)	109' x 15'11" x 7'4"	Wrecked, Nov. 19, 1846 (near Dunkirk, NY)	1; 2; 5; 6; 7 (101)
<i>Maid of the Mill</i> (C†)	1844		Louis Shickluna, St. Catherines, ON	W. Gamble			Grounded, Oct. 28, 1844 (Humber Bay, Lake Ontario)	5
<i>Manchester</i> (A*)	1844	100	Taycheedah, WI		High pressure			1

Vessel Name	Year Built	Tons	Builder	Owners	Engine Type	Dimensions	Remarks	Source
<i>Michigan, USS (A*)</i>	1844	582 [583]	Stackhouse, Tomlinson & Co.; Samuel Hartt, USN (carpenter), Pittsburgh & Erie, PA	U.S. Navy	Two 36" x 39", 18.3rpm inclined direct-acting engines, high pressure [low pressure] (Samuel Stackhouse)	167'3" x 27'1" x 7'2"	Dismantled, 1948 and 1949 (Erie, PA)	1; 2; 3 (VI:192); 5
<i>Porter (A†)</i>	1844	342	Buffalo, NY					1
<i>Quebec (C*)</i>	1844	715	Black, Quebec, QC		60" x 132"	271' x 29' x 9'6"	Rebuilt, 1855	5
<i>Racine (A†)</i>	1844	174.74 [150]	Sylvester Doolittle, Oswego, NY	Sylvester Doolittle, et al		95' x 20' x 10'	Abandoned, 1851	1; 5; 7 (181)
<i>St. Louis (A*)</i>	1844	618.02 [818; 618]	Samuel L. Hubbell, Perrysburg, OH	John H. Hollister, et al [Samuel & Eber B. Ward]	44" x 108" crosshead, low pressure (Allaire Iron Works, New York, NY- from <i>Sandusky</i> , 1834)	190'1" x 27'5" x 12'4"	Wrecked, Nov. 7, 1852 (off Kelley's Island, Lake Erie)	1; 2; 3 (II:233); 5; 6; 7 (191)
<i>Swan (C†)</i>	1844		William Parkin, Brockville, ON	Murray & Sanderson			Sold foreign, 1848	5
<i>Wolcott, James (A*)</i>	1844	84.13 [80]	David R. Stebbins, Maumee, OH		High pressure	101'10" x 17'6" x 5'	Burned, 1851; abandoned, 1852	1; 2; 5; 7 (110)
<i>Astor (A*)</i>	1845	93.03 [200]	Green Bay, WI		Two 25hp engines, high pressure		Converted to schooner, 1849; dismantled, 1855	1; 2; 5
<i>Boston (A*)</i>	1845	757 80/95 [775]	John Robinson, Detroit, MI	John Robinson	Side lever, high pressure (Leash & Co., Pittsburg, PA)	205' x 30' x 13'	Wrecked, Nov. 24, 1846 (Milwaukee, WI)	1; 2; 5; 6; 7 (24)
<i>British Empire (C*)</i>	1845	137.29	John Oades, Port Metcalfe, ON	River & Lake Steamboat Co.		167'9" x 22'6" x 7'5"	Sank, 1856	5
<i>Clay, Henry (A†)</i>	1845	315	Dexter, NY					1
<i>Detroit (A†)</i>	1845	293 71/95 [290]	Fairbanks Church; Matthew Gooding (carpenter) [John Stupinsky], Detroit, MI	Lawson, Howard, & Co. [Dwight Johnson]	Crosshead (Detroit Iron Co., Detroit, MI)	128'6" x 25' x 9'10"	Converted to barge, 1863; foundered, Nov. 1874 (off Point Abino, Lake Erie)	1; 3 (IV:79); 5; 7 (54)
<i>Enterprise (A*)</i>	1845	100	Green Bay, WI		High pressure		Repaired, Nov. 1856 (Milwaukee, WI)	1; 2; 5

Vessel Name	Year Built	Tons	Builder	Owners	Engine Type	Dimensions	Remarks	Source
<i>Indiana</i> (A*)	1845	100	St. Joseph River, MI		High pressure			1
<i>London</i> (C*, aka <i>Oliver Lee</i>)	1845	432 [456]	Niagara Harbour & Dock Co., Chippewa, ON	J. Macklem, H. VanAllen	80hp vertical walking beam, low pressure	160'6" x 25'2" x 10'6"	Converted to bark, renamed, 1856; wrecked, Nov. 4, 1857 (Bois Blanc Island, Lake Huron)	1; 2; 3 (III:209); 5
<i>Napoleon</i> (A†)	1845	120 [181]	Samuel Ward, Sault Ste. Marie, MI	Oliver Newberry		92' 24'8" x 9'1"	Converted to propeller, 1850; wrecked, Dec. 2, 1857 (off Saugeen, ON)	5; 6; 7 (152)
<i>Niagara</i> (A*)	1845	1084 [1100; 1099; 1009]	Mason & Bidwell; Jacob W. Banta (carpenter), Buffalo, NY	New York & Erie Railway Co.	65" x 120" vertical walking beam, low pressure (Shepard Iron Works, Buffalo, NY)	230' x 33'5" x 14'	Burned, Sep. 24, 1856 (off Port Washington, WI)	1; 2; 3 (II:163); 5; 6; 7 (157)
<i>Niagara</i> (A*, aka <i>Usat Suffolk</i>)	1845	473	John Oades, French Creek (Clayton), NY	Elijah B. Allen, Capt. James VanCleve, et al	40" x 132" vertical walking beam, low pressure (Henry R. Dunham & Co., New York, NY)	188'8" x 27' x 10'	Sank, Oct. 7, 1864 (off New Orleans, LA)	3 (III:253); 5; 7 (157)
<i>Oregon</i> (A†)	1845	312 91/95 [320; 313]	Moses & Sanford, Cleveland, OH	John M. Woolsey, et al		144' x 23'3" x 9'10"	Boiler explosion, Apr. 20, 1855 (Belle Island, MI); sank, Nov. 1859 (St. Clair Flats)	1; 5; 6; 7 (164)
<i>Oregon</i> (A*)	1845	781 5/95	John L. Wolverton; Zadoc Pangborn (carpenter), Newport, MI [St. Clair, MI]	John P. Phillips	Two 48" x 108", 650hp horizontal, high pressure (Litch & Co., Pittsburgh, PA)	203'6" x 30' x 13'4"	Burned, Jan. 19, 1850 (Chicago, IL)	1; 2; 3 (II:187); 5; 6; 7 (164)
<i>Oregon</i> (C*)	1845	75	Eagan & Aumonde, Fitzroy, ON	The Union Forwarding & Railway Co. of Ottawa; Alfred Brown	(Ward Eagle Foundry, Montreal, QC)	125' x 16' x 8.03'	Grounded, 1877	3 (V:215)

Vessel Name	Year Built	Tons	Builder	Owners	Engine Type	Dimensions	Remarks	Source
<i>Owen, John (A*)</i>	1845	191.38 [230]	Eli Bates, Truago (Trenton), MI [Detroit, MI]	John Owen, et al	55hp, low pressure (from <i>Little Erie</i> , 1836)	139' x 19' x 7'6"	Burned, Apr. 13, 1860 (Algonac, MI); abandoned, 1861	1; 2; 5; 6; 7 (114)
<i>Phoenix (A†)</i>	1845	302 90/95 [395; 350]	George W. Jones, Ohio City (Cleveland), OH	Pease & Allen Inc.; William F. Allen	Two 20" x 43 3/8", 75rpm (Cuyahoga Steam Furnance Co., Cleveland, OH)	144' x 26' x 11' [140'6" x 22'7" x 10'.5"]	Burned, Nov. 20, 1847 (off Sheboygan, WI)	1; 3 (VI:249); 5; 6; 7 (172)
<i>Pilot (A*)</i>	1845	35 [80]	Union City, MI [Union City, MN]			90' x 17'	Sank ,Apr. 12, 1847 (Mishawaka, IN)	1; 5
<i>Princeton (A†)</i>	1845	455 73/95 [456]	Samuel L. Hubbell, Perrysburg, OH	JohnH. Hollister, Capt. Amos Pratt, et al	Two horizontal direct- acting engines, high pressure (New York State Prison, Auburn, NY)	177'10" x 24'6" x 10'10"	Crushed by ice, Apr. 20, 1854 (near Van Buren Point, NY)	1; 3 (II:209); 5; 6; 7 (178)
<i>Riche Lieu (C*, aka Belmont, Richelieu)</i>	1845	205 28/94	William Parkin, Montreal, QC	La Societe de Navigation du Richelieu		130' x 17'9" x 7'1"	Rebuilt/renamed several times; wrecked, abandoned, 1959 (Valleyfield, QC)	5
<i>Romeo (A*, aka I.T. Pheatt)</i>	1845	160 68/95 [180]	Lawson, Howard & Co.; D.M. Goodsell (carpenter), Detroit, MI	Charles Bissell, B.B. Kercheval, et al	High pressure	100' x 22' x 8'	Possibly renamed, 1859; foundered, Sep. 10, 1869 (Saginaw Bay, Lake Huron)	1; 2; 5; 7 (188)
<i>Strong, Helen (A*)</i>	1845	207.41 [253; 217]	F.N. Jones, Monroe, MI	George W. Strong	Crosshead, high pressure	142' x 19'10" x 8'	Grounded, Nov. 19, 1846 (off Barcelona, NY)	1; 2; 5; 6; 7 (93)
<i>Superior (A*)</i>	1845	567.18	Samuel L. Hubbell, Perrysburg, OH	Capt. David Wilkinson, et al	Inclined horizontal engine, high pressure (from <i>O.H. Perry</i> , 1834)	191' x 27'8" x 11'2"	Stranded, Oct. 30, 1856 (Pictured Rocks, Lake Superior)	1; 2; 5; 6; 7 (205)

Vessel Name	Year Built	Tons	Builder	Owners	Engine Type	Dimensions	Remarks	Source
<i>Syracuse</i> (A†, aka <i>Lord Elgin</i>)	1845	314 70/95 [345; 315]	George S. Weeks, Oswego, NY	Moses Merrick, et al		120'8" x 23'9" x 11'10"	Sold foreign, renamed, 1851; wrecked, Dec. 2, 1856 (Long Point, Lake Ontario)	1; 5; 6; 7 (207)
<i>Transit</i> (C*)	1845		Hugh Richardson	Paul & James McQuaig		125'3" x 20' x 9'7"		5
<i>Troy</i> (A*)	1845	546 [547]	David R. Stebbins; F.N. Jones (carpenter), Maumee, OH	John H. Hollister	Crosshead, high pressure	182'6" x 27'6" x 11'4"	Boiler explosion, Mar. 1850; lost, 1860 (off Goderich, ON); dismantled, 1861	1; 2; 3 (III:329); 5; 6; 7 (215)
<i>Victory</i> (A†)	1845		Moses & Sanford, Cleveland, OH	Capt. Hart				5
<i>Albany</i> (A*)	1846	669.36	C.L. Gager; Charles Worth (carpenter), Detroit, MI	C.L. Gager	Low pressure	202' x 29' x 11'8" [202' x 29' x 12']	Wrecked, Nov. 25 [26], 1853 (Presque Isle, Lake Huron)	1; 2; 5; 6; 7 (5)
<i>Algoma</i> (A*, aka <i>Algomah</i>)	1846	71.4	John Randall; Henry C. Deputy (carpenter), Mishawaka, IN	Talman & Hiram Wheeler, John F. Porter	Horizontal, high pressure (from <i>Pocahontas</i> , 1843)	127' x 15'9" x 3'8"	Abandoned, 1870 or 1874	1; 5; 7 (6)
<i>Aylmer</i> (C*)	1846	202	William Perkins, Aylmer, QC			111' x 25'	Broken up, 1864	5
<i>British Queen</i> (C*)	1846	118.66	John Oades, Port Metcalfe, ON	Lake Ontario Steamboat Lines		167'9" x 21'9" x 6'6"		5
<i>Caledonia</i> (C*)	1846	109	Portsmouth, ON			93' x 17'6" x 6'5"	Broken up, 1865	5
<i>California</i> (A†)	1846	420 26/95	Bidwell & Banta; Jacob W. Banta (carpenter), Buffalo, NY	Kimberly & Pease	18" x 34", high pressure	169'5" x 25'5" x 10'3"	Grounded, Oct. 23, 1862 (Gull Island Reef)	1; 5; 6; 7 (28)
<i>Canada</i> (C*)	1846	738 [800; 758; 750]	Niagara Harbour & Dock Co.; Robert Gilkison or Mr. Ewe, Chippewa, ON	J. Macklem, H. VanAllen, et al	60" x 120", 150hp vertical walking beam, low pressure (Macklem Iron Works, Chippewa, ON)	199'2" x 27'9" x 13'	Converted to bark, 1850; wrecked, Aug. 30, 1858 (Chicago, IL)	1; 2; 3 (IV:23); 5; 6

Vessel Name	Year Built	Tons	Builder	Owners	Engine Type	Dimensions	Remarks	Source
<i>Cataract</i> (A*, aka <i>Columbian</i>)	1846	577 29/95	John Oades, Clayton, NY [Ogdensburg, NY]	St. Lawrence Steam Boat Co.	44" x 132" vertical walking beam (Henry R. Dunham & Co., New York, NY)	209'6" x 27'6" x 9'9"	Sold to Canadian Navigation Co., 1869	3 (III:57); 5; 7 (31)
<i>Cathcart, Earl</i> (C*, aka <i>F.W. Backus</i>)	1846	298; 330	Eli Bates, Malden, ON	Parks	Two 40hp horizontal engines (Cuyahoga Steam Furnance Co., Cleveland, OH)	133' x 27' x 9.01' [133' x 25' x 9']	Converted to propeller, 1852; burned, Nov. 25, 1866 (off Racine, WI)	1; 5; 6
<i>Cleveland</i> (A†)	1846	341 45/95 [342]	George W. & Benjamin B. Jones; Benjamin B. Jones (carpenter), Cleveland, OH	Jonathan Gillett, et al	(Cuyahoga Steam Furnance Co., Cleveland, OH)	141'7.5" x 24'2.5" x 10'6.5"	Converted to bark, 1860; grounded, Jun. 11, 1875 (Pilot Island, Lake Michigan)	1; 5; 7 (39)
<i>Clifton</i> (A†)	1846	111 56/95	Dexter, NY	James A. Bell, et al	Two engines	101'6" x 18'4" x 6'6"	Abandoned, 1862; lost, 1874	5; 7 (39)
<i>Croton</i> (A†)	1846		George W. & Benjamin B. Jones, Cleveland, OH					5
<i>Dallas, USRC</i> (A*)	1846	370	Novelty Iron Works, Buffalo, NY	U.S. Navy	Low pressure	160' x 24' x 9'6"		1; 5
<i>Deleware</i> (A†)	1846	368.60 [350]	T.H. Cobb & A. Gilmore; George W. Jones (carpenter), Black River (Charleston), OH	William J. Pardee, et al	(Philadelphia, PA)	137'7" x 23'10" x 11'11"	Sank, Nov. 3, 1855 (off Sheboygan, WI)	1; 5; 6; 7 (53)
<i>Detroit</i> (A*)	1846	352 71/95 [354; 350]	John L. Wolverton, Newport, MI	Samuel & Eber B. Ward	Vertical walking beam, low pressure	157' x 23'3" x 10'1"	Collided w/ brig <i>Nucleus</i> , May, 25, 1854 (off Pointe Aux Barques, Lake Huron)	1; 2; 5; 6; 7 (54)
<i>Emerald</i> (C*)	1846	185	William Perkins, Aylmer, QC					5
<i>Empire</i> (A*)	1846	90 32/95 [200]	Jasper Parish, Grand Rapids, MI	Harvey P. Yale, Warne P. Mills	High pressure	130' L.	Wrecked, 1853	1; 5; 7 (64)

Vessel Name	Year Built	Tons	Builder	Owners	Engine Type	Dimensions	Remarks	Source
<i>Genesse Chief</i> (A†)	1846	429 42/95 [400]	George Steers, Rochester, NY [Carthage, NY]		Two engines	140' x 25'8" x 12'9"	Converted to barge, Sep. 5, 1868; scuttled, 1891	1; 5; 7 (83)
<i>Globe</i> (A†)	1846	313 34/95 [243]	F.N. Jones [Samuel Hubbell], Maumee City, OH	Joshua Maxwell, et al	Two 16" x 28" direct- acting engines, high pressure (Cuyahoga Steam Furnance Co., Cleveland, OH)	143' x 24' x 9'5"	Converted to barge, Jul. 1, 1868; abandoned, Oct. 1, 1875 (Buffalo, NY)	1; 3 (II:101); 5; 7 (86)
<i>Goliath</i> (A†, aka <i>Goliah</i>)	1846	279 63/95 [376]	Burton S. Goodsell [O.M. Goodsell], Palmer (St. Clair), MI	Wesley Truesdell	Two 16" x 28" Ericsson engines, high pressure (Cleveland, OH)	131' x 25'6" x 9'	Burned, Sep. 13, 1848 (near Harbor Beach, Lake Huron)	1; 5; 6; 7 (87)
<i>Hudson, Hendrick</i> (A*)	1846	750 46/95	George W. Jones, Black River, OH	G.W. Jones, H.M. Kinnie	30" x 120", 500hp, high pressure (Cuyahoga Steam Furnance Co., Cleveland, OH)	204'8" x 32' x 12'	Burned, May 21, 1860 (Cleveland, OH)	1; 2; 5; 6; 7 (93)
<i>Ireland</i> (C*)	1846	269	Fuller & Hood, Kingston, ON	Robert Patterson	32" x 21" 140hp, high pressure (Kingston Foundry Co., Kingston, ON)	134'1" x 21'9" x 9'6"	Burned, Aug. 9, 1852 (St. Lawrence River)	1; 5
<i>Islander</i> (A*)	1846	73 35/95 [80]	Daniel Dibble, Kelley's Island (Cunningham's Island), OH	Datus Kelley, et al	Sawgut 1 x 4 (?)	76' x 16'2" x 6'6"	Burned, 1876 (Ottawa)	1; 5; 7 (104)
<i>Lady of the Lake</i> (A†)	1846	326 16/95	Alvin A. & Samuel W. Turner; Ira Lafrinier (carpenter), Cleveland, OH	Capt. Robert Kyle, et al		141'3" x 24'3" x 10'1"	Boiler explosion, Mar. 26, 1859 (off Fairport, OH)	1; 5; 6; 7 (124)
<i>Lord Byron</i> (C†)	1846	300	Kingston, ON	Patterson	140hp, high pressure			5
<i>Louisiana</i> (A*)	1846	776 [900; 777]	Jacob W. Banta, Buffalo, NY [Erie, PA]	Charles M. Reed	50hp crosshead, low pressure (Allaire Iron Works, New York, NY- from <i>Thomas Jefferson</i> , 1834)	224' x 28'11" x 12'5"	Wrecked, Oct. 20, 1857 (near Port Burwell, ON)	1; 2; 3 (IV:179); 5; 6; 7 (131)
<i>Mammoth</i> (C*)	1846	152	Louis Shickluna, St. Catherines, ON	Henry & Sydney Jones		87'8" x 17'8" x 6'8"		5

Vessel Name	Year Built	Tons	Builder	Owners	Engine Type	Dimensions	Remarks	Source
<i>Menomonee Badger</i>	1846				High pressure			1
<i>Mishawaka</i> (A*)	1846	34.15	Mishawaka, IN		High pressure		Converted from schooner; rebuilt, 1847	1; 5; 7 (146)
<i>Munn, John</i> (C*)	1846	374	Quebec, QC			292' x 26'8" x 9'9" [305' x 26'8" x 10']	Rebuilt, 1860; dismantled, 1863	5
<i>Niles</i> (A*)	1846		Niles, MI					1
<i>Noyes</i> (C*)	1846	224	Kingston, ON					5
<i>Odd Fellow</i> (A†)	1846	167.35 [250]	D.H. Corbin, Grand Haven, MI [Grand River, MI]	J.F. Portoer & Co.		110' x 18' x 8'10"	Rebuilt, 1853; abandoned, 1857	1; 5; 7 (161)
<i>Oneida</i> (A†)	1846	355 41/95 [345]	Benjamin B. Jones, Cleveland, OH	Pease & Allen Inc.		138'3" x 24'1" x 11'	Sank, Nov. 11, 1852 (off Barcelona, NY)	1; 5; 6; 7 (163)
<i>Ontario</i> (A†, aka <i>Carrier Pigeon</i>)	1846	428 [350]	Hosea Rogers or George Spears (Steers?), Rochester, NY	Alexander Kelsey & Co.		136'8" x 25'2" x 9'11"	Rebuilt/renamed, 1853 or 1858	1; 5; 7 (164)
<i>Oregon</i> (C*)	1846	157	William Perkins, Chatts or Sorel, QC			125' x 16' x 8'5"		5
<i>Passport</i> (C*, aka <i>Caspian</i>)	1846	346 1786/3500	William McAusland, Kingston, ON	John Hamilton	80hp oscillating (Scotland)	171'7" x 25' x 10'	Dismantled, 1922	5
<i>Patchin, A.D.</i> (A*)	1846	873.78 [870]	Joseph M. Keating, Truago (Trenton), MI	Capt. Harry D. Whittaker, Aaron D. Patchin	Side lever, high pressure (from <i>Missouri</i> , 1840)	225'9" x 29' x 13'9" [226' x 29' x 14']	Wrecked, Sep. 17 [27], 1850 (Skillagallee Reef, Lake Michigan)	1; 2; 3 (II:1); 5; 6; 7 (1)
<i>Pocahontas</i> (A†)	1846	426 64/95 [427]	Bidwell & Banta; F.N. Jones (carpenter), Buffalo, NY	Walter Joy		171'9" x 24'11" x 10'4.5"	Wrecked, Apr. 8, 1862 (Long Point)	1; 5; 6; 7 (175)

Vessel Name	Year Built	Tons	Builder	Owners	Engine Type	Dimensions	Remarks	Source
<i>Queen of the West</i> (C†)	1846		Malden, ON					1
<i>Saratoga</i> (A*)	1846	661.8 [800]	Moses & Sanford, Cleveland, OH	N.C. Winslow, et al	High pressure (Cuyahoga Steam Furnance Co., Cleveland, OH)	199'4" x 29.75' x 11'10.75"	Wrecked, Jul. 29, 1854 (Port Burwell, ON)	1; 2; 3 (II:235); 5; 6; 7 (195)
<i>Speed</i> (C*)	1846		MacPhersIn & Crane, Hull or Bytown (Ottawa), QC			170' x 24'	Burned, Jun. 24, 1847 (off Bytown, ON)	5
<i>St. George</i> (C†)	1846	194.91	J.W. Bissetts, Rochester, NY	George Hardison		134' x 23'6" x 9'9"		5
<i>St. Joseph</i> (A†)	1846	460	Bidwell & Banta; Jacob W. Banta (carpenter), Buffalo, NY	Oliver Bugbee, et al	Two 100hp engines (Buffalo Steam Engine Works, Buffalo, NY)	170'1.5" x 26'10.5" x 10'6.75"	Stranded Nov. 10, 1856 (near Fairport, OH)	1; 5; 6; 7 (191)
<i>Sultana</i> (A*)	1846	806.4 [900; 800]	Zadoc Pangborn, Trenton, MI [Algonac, MI]	Gillman Appleby	48"x 132" crosshead, low pressure (T.F. Secor & Co., NY)	217'3" x 30'6" x 12'7"	Converted to sloop barge, May 27, 1862; stranded, Oct. 12, 1863 (off Point Aux Barques, MI)	1; 2; 3 (II:245; VI:291); 5; 7 (205)
<i>Wood, James</i> (A†)	1846	286.84 [400]	Dexter, NY	Horace W. Woodruff, et al		124' x 25' x 10'	Stranded, Sep. 12, 1852 (near Ashtabula, OH)	1; 5; 6; 7 (110)
<i>America</i> (A*)	1847	1083 27/95	John W. Searles, Port Huron, MI	John P. Phillips	30" x 168" vertical walking beam (Franklin Foundry, Cincinnati, OH)	240'2" x 34'2.5" x 13'8"	Boiler explosion, Jul. 31, 1850; stranded, Apr. 5, 1854 (near Point Pelee)	3 (III:3); 5; 6; 7 (9)
<i>Baltic</i> (A*)	1847	825 27/95 [800]	Bidwell & Banta; Jacob W. Banta (carpenter), Buffalo, NY	Levi Tillotson, Franklin Kingman	35" x 96", high pressure (from <i>Constitution</i> , 1837)	225' x 30'4" x 12'6"	Converted to propeller, 1864; wrecked, Oct. 1, 1872 (off Long Point, Lake Erie)	1; 2; 3 (II:11); 5; 7 (17)
<i>Baltimore</i> (A*, aka <i>Columbia</i>)	1847	513 [500]	A.C. Keating, Monroe, MI	George Strong	High pressure (possibly Eagle Iron Works, Buffalo, NY)	174' x 26'3" x 11'9" [170' x 22' x	Wrecked, Sep. 17, 1855 (near Sheboygan, WI)	2; 5; 6; 7 (17)

Vessel Name	Year Built	Tons	Builder	Owners	Engine Type	Dimensions	Remarks	Source
						11']		
<i>Boston</i> (A†)	1847	259 5/95	Alvin A. & Samuel W. Turner, Cleveland, OH	James Monroe, H. Krumens, W. Ogrum, L. Parmetter		133'8" x 24'10" x 9'9" [134' x 21' x 10']	Collided w/ bark <i>Plymouth</i> , Jul. 28, 1854 (off Oak Orchard, NY)	5; 6; 7 (24)
<i>Britannia</i> (C*)	1847	276 [275]	Louis Shickluna, St. Catherines, ON	J.B. Ewart, et al	Vertical walking beam	135'3" x 23'3" x 10'2"	Burned, Nov. 1855	5; 6
<i>Cataraqui</i> (C*, aka <i>Swan</i>)	1847	101	P.R. & B. Beaupre, Kingston, ON	James A. Glassford		90'10" x 17' x 7'2"	Renamed, 1854; lost, 1864	5; 6
<i>Charter Oak</i> (A†)	1847	184 24/95	Bidwell & Banta; Benjamin Bidwell (carpenter), Buffalo, NY	Ansel R. Cobb, Charles W. Rogers		104'5" x 22'3.5" x 8'7.5"	Converted to propeller, 1848; grounded, Oct. 28, 1855 (off Girard, PA)	5; 6; 7 (34)
<i>Cincinnati</i> (A*, aka <i>City of Hamilton</i> ; <i>Alps</i> ; <i>Indian</i>)	1847	530 [500; 366]	Stebbins, Newel & Morris; Thomas Wicks, George S. Weeks, Maumee, OH; Buffalo, NY	Henry Fitzhugh, Dewitt C. Littlejohn, et al	65hp	139'6" x 23'6" x 11'	Wrecked, Dec. 1854 (near Forestville, MI); rebuilt/renamed, 1854; burned, Oct. 26, 1885 (Kingston, ON)	5; 6
<i>Dawn</i> (C*)	1847	168	William Parkin, Brockville, ON	Henry & Sydney Jones		160' x 23'	Wrecked, 1862	5
<i>Diamond</i> (A*)	1847	331 1/95 [336]	Jacob W. Banta, Buffalo, NY	Richard Liddle, et al	High pressure (Knapp & Totten, Pittsburgh, PA)	151' x 24'6" x 9'5"	Broken up, 1860	1; 2; 5; 7 (54)
<i>England</i> (C‡)	1847	246	Niagara Harbour & Dock Co.; J. Ewing (carpenter), Niagara, ON			136' x 24' x 11'	Dismantled, 1872	5

Vessel Name	Year Built	Tons	Builder	Owners	Engine Type	Dimensions	Remarks	Source
<i>Fashion</i> (A*)	1847	324 32/95	Zodoc Pangborn, Algonac, MI	Francis W. Lawson, et al		160' x 25' x 8'5"	Grounded, Nov. 1856 (off Bayfield, ON); abandoned, 1857	5; 6; 7 (71)
<i>General Taylor</i> (A†)	1847	462 91/95	F.N. Jones, Buffalo, NY	Asa E. Hart, et al		172'8" x 25'8" x 10'10"	Grounded, Oct. 3, 1862 (Sleeping Bear Point, MI)	5; 6; 7 (82)
<i>Humming Bird</i> (A*)	1847		Henry Steele, Lamont, MI				Boiler explosion, 1854	5
<i>Iowa</i> (A†)	1847	1182 14/95	Benjamin J. Goodsell, Trenton, MI	Samuel Robinson, George L. Chapman		248'8" x 34'7" x 14'3"	Rebuilt, 1862	5
<i>Magnet</i> (C*, aka <i>Hamilton</i>)	1847	433	James Currie, Niagara, ON	W.J. Gunn, J. Sutherland	43.5" x 120" vertical walking beam (Niagara Harbour & Dock Co.)	173' x 26'7" x 7'6"	Rebuilt twice, 1859, 1877; converted to barge, 1909	3 (III:215); 5
<i>Manhattan</i> (A†)	1847	319 68/95 [330]	Alvin A. & Samuel W. Turner [Moses & Sanford], Cleveland, OH	Alvin A. & Samuel W. Turner		140' x 25'2.5" x 9'11.5" [149' x 23' x 10']	Foundered, Sep. 1, 1859 (near Grand Marais, MI)	1; 5; 6; 7 (135)
<i>Michigan</i> (A*)	1847	47.75	Mottville, MI	Oliver Newberry	Low pressure		Abandoned, 1855	5; 7 (144)
<i>Michigan</i> (A*)	1847	642 [647; 600]	Oliver Newberry [Burton S. Goodsell], Detroit, MI	Oliver Newberry	Vertical walking beam, low pressure	190' x 27'8" x 11'1"	Converted to barge, May 26, 1866; broken up, 1868	1; 3 (III:231); 5; 7 (144)
<i>Niles</i> (A*)	1847	40.34	William B. Beeson, Mishawaka, IN			105' L.	Abandoned, 1855	5; 7 (158)
<i>Ohio</i> (A*)	1847	583 36/95 [600]	Moses & Sanford, Cleveland, OH	Atwater, Joy, & Webster, et al	29" x 108", 400hp, high pressure (Cuyahoga Steam Furnance Co., Cleveland, OH)	197'7.5" x 28'1" x 10'11"	Dismantled, Jul. 1860	1; 2; 5; 7 (162)
<i>Ontario</i> (A*)	1847	832.51	John Oades, Clayton, NY	Ontario & St. Lawrence Steamboat Co.	50" x 132" vertical walking beam (T.F. Secor & Co., NY)	232'1" x 32'2" x 11'6"	Rebuilt, 1867; sank, 1883	3 (III:265); 5; 7 (164)

Vessel Name	Year Built	Tons	Builder	Owners	Engine Type	Dimensions	Remarks	Source
<i>Paugassett</i> (A†, aka <i>Powhasset</i>)	1847	323 45/95 [320; 310]	Moses & Sanford; Luther Moses (carpenter), Ohio City (Cleveland), OH	John M. Woolsey, et al		140'4" x 22'4.5" x 9'9"	Burned, Aug. 23, 1856 (Dunkirk, NY)	1; 5; 6; 7 (168)
<i>Ringold</i> (A*)	1847	500	Monroe, MI		High pressure			1
<i>Rossiter, A.</i> (A†, aka <i>A. Rossetter</i>)	1847	200.67	George Allen, Chicago, IL	Erastus Bowen, et al	(B.P. Andrews & Co., Chicago, IL)	120'1" x 21'1" x 8'1"	Wrecked, Oct. 11, 1855 (off Calumet, IL)	5; 6; 7 (2)
<i>Seneca</i> (A†)	1847	73	Vincent Bidwell, Buffalo, NY	Wardell Guthrie		92' x 14' x 6'	Boiler explosion, Oct. 16, 1855 (Chicago, IL)	6
<i>Southerner</i> (A*)	1847	550 17/95 [500]	A.C. Keating, Trenton, MI [Monroe, MI]	Benjamin F. Field, et al	27" x 36", high pressure (Hathaway & Co., Cleveland, OH- from <i>Anthony Wayne</i> , 1847)	176'10" x 28' x 11'7.75"	Grounded, Oct. 28, 1853 (near Ashtabula, OH)	1; 2; 5; 7 (201)
<i>Stewart, John</i> (C*)	1847	110	King, Kingston, ON					5
<i>Ward, Samuel</i> (A*)	1847	433.58 [450; 375]	John L. Wolverton, Newport (Marine City), MI	Samuel & Eber B. Ward	40" x 120" vertical walking beam, low pressure (Novelty Iron Works, New York, NY)	175'7" x 25'8" x 10'	Converted to bark, Dec. 1860 (Newport, MI); abandoned, 1875 (Toledo, OH)	1; 2; 3 (III:305); 5; 7 (194)
<i>Alabama</i> (A*)	1848	799 45/95 [600]	William Gooding, Detroit, MI	Marshall Burton, et al	Two 28" x 84", 350hp engines, high pressure (G.W. Johnson, Detroit Hydraulic Works)	234'6" x 29'2" x 12' [234' x 29' x 12']	Foundered, Aug. 28, 1854 (Buffalo, NY)	2; 5; 6; 7 (4)
<i>Albion</i> (A*)	1848	115 17/95	John H. Pitt or David Stebbins, Maumee City, OH	Daniel F. Cook, William Kingsbury		106' x 18'2" x 6'4"	Converted to barge, 1863; dismantled, 1865	5; 7 (5)
<i>Arrow</i> (A*)	1848	373.52 [350]	Patrick Bates Yard; Arthur Edwards (carpenter), Trenton, MI [Cleveland, OH]	Arthur Edwards, et al	46" x 120", 325hp vertical walking beam, low pressure (Murphy Iron Works, NY)	183' x 24'8" x 8'5"	Dismantled, 1864 (Green Bay, WI)	2; 5; 7 (14)

Vessel Name	Year Built	Tons	Builder	Owners	Engine Type	Dimensions	Remarks	Source
<i>Atlantic</i> (A*)	1848	1155 18/95 [1100]	John L. Wolverton, Newport (Marine City), MI	Samuel & Eber B. Ward	60" x 132" vertical walking beam, high pressure (Hogg & Delamater, Phoenix Foundry, NY)	265'7" x 33' x 13'6" [267' x 33' x 12'7"]	Collided w/ steamer <i>Ogdensburgh</i> , Aug. 20, 1852 (off Long Point, Lake Erie)	2; 3 (II:7); 5; 6; 7 (15)
<i>Bay State</i> (A*, aka <i>Athenian</i>)	1848	934	John Oades, Clayton, NY	Ontario & St. Lawrence Steamboat Co.	56" x 132", 400hp vertical walking beam (Henry R. Dunham & Co., New York, NY)	220' x 37' x 10'	Rebuilt/renamed, 1868; wrecked, 1883	5; 7 (18)
<i>Cartier, Jacques</i> (C*)	1848	278	Montreal, QC		Vertical walking beam	168' x 24' x 8'	Foundered, 1860	5
<i>Charter</i> (A*)	1848	197 64/95 [350]	Frederick D. Ketchum, Huron, OH [Detroit, MI]	Chipman P. Turner, Henry P. Smith	High pressure	131'11" x 20'2.75" x 7'9"	Converted to propeller, 1853; wrecked, Aug. 20, 1856 (off Fairport, OH)	2; 5; 6; 7 (34)
<i>Columbia</i> (A*)	1848	168 54/95 [170; 167]	Joel R. Norton, Fairport, OH	Aaron Wilcox	High pressure	117' x 18'6" x 8'2"	Wrecked, 1866 (Lake Huron)	2; 5; 6; 7 (42)
<i>Comet</i> (C*, aka <i>Mayflower</i>)	1848	336.1 [337]	Fisher's Shipyard; George N. Ault (carpenter), Portsmouth, ON	James, Joseph & Lewis Platt	Two vertical walking beam engines (Ward Eagle Foundry, Montreal, QC)	174' x 23'5" x 10'	Renamed, 1851; burned, May 14, 1861 (near Oswego, NY)	3 (V:69); 5; 6
<i>Commerce</i> (C*, aka <i>Reindeer</i>)	1848	236 [272]	John Quain [George N. Ault], Portsmouth, ON	McPherson, Crane, & Co.	Vertical direct-acting, high pressure	134'1" x 23'8" x 9'2" [134' x 24' x 9']	Rebuilt/renamed , 1851; Pollywog steamer; wrecked, Oct. 19, 1857 (off Big Sable Point)	3 (VI:59); 5; 6
<i>Empire State</i> (A*)	1848	1553 70/95 [1700]	John Griffin; Capt. A. Walker (carpenter), St. Clair, MI	Morris Hazard, et al	76" x 144" vertical walking beam (Merrick & Towne Foundry, Philadelphia, PA)	298'11" x 37' x 14'5"	Scrapped, 1857; converted to dry dock, 1858 (St. Clair Flats)	2; 3 (III:123); 5; 7 (65)

Vessel Name	Year Built	Tons	Builder	Owners	Engine Type	Dimensions	Remarks	Source
<i>Free Trader</i> (C*)	1848	244.68 [134]	Augustin Cantin, Montreal, QC	Luther H. Holton, Frances Henderson	75hp, low pressure	136'3" x 24'3" x 10'1"	Burned, Oct. 25, 1857 (Port Stanley, ON)	5; 6
<i>Gager, Charles S.</i> (A*)	1848	43	Dansville, NY				Abandoned, 1850	5; 7 (33)
<i>Globe</i> (A*)	1848	1233 26/95 [1223; 1200]	Burton S. Goodsell; John Robinson (carpenter), Trenton, MI [Detroit, MI]	Samuel Robinson, et al	Side lever (Boston, MA)	251' x 34'10" x 14'6"	Converted to propeller, 1856; boiler explosion, Nov. 6, 1860 (Chicago, IL)	2; 3 (II:103); 5; 6; 7 (86)
<i>Griffith, G.P.</i> (A*)	1848	587 41/95	David R. Stebbins, Maumee, OH	Richard Sears, et al	30" x 108" crosshead (Cuyahoga Steam Engine Works, Cleveland, OH)	193'3" x 28'1" x 11'3"	Burned, Jun. 17, 1850 (off Cleveland, OH)	3 (II:93); 5; 6; 7 (78)
<i>Higginson, G.M.</i> (A*)	1848	65	Lake Michigan				Abandoned, 1854	5; 7 (78)
<i>Hollister, John</i> (A*, aka <i>Oxford</i>)	1848	218 90/95 [300]	W.V. Kingsbury & D.F. Cook, Perrysburg, OH	H.F. (or S.F.) Hollister	75hp (Hendrick, Detroit, MI)	132' x 20' x 8'8"	Burned, Jan. 1849 (Lake Erie); rebuilt/renamed as propeller, 1854; foundered, 1855	2; 5; 6; 7 (114)
<i>Indiana</i> (A†)	1848	349 34/95 [350]	Joseph M. Keating; Burton (aka Benjamin) S. Goodsell (?), Vermilion, OH	Ahira Cobb, et al		144'6" x 23' x 10'10" [146' x 23' x 11']	Foundered, Jun. 6, 1858 (off Crisp Point, MI)	5; 6; 7 (101)
<i>Lily</i> (C*)	1848	48	Montreal, QC					5
<i>Lord Elgin</i> (C*, aka <i>Montreal</i>)	1848	51.15	Augustin Cantin, Montreal, QC	John Kennedy, et al		155' x 23' x 8'4"	Wrecked, 1873	5
<i>Montezuma</i> (A†)	1848	332 63/95 [322]	Luther Moses & Sanford, Cleveland, OH	Hiram Niles, et al	(Cuyahoga Steam Furnance Co., Cleveland, OH)	149'4" x 23' x 9'1"	Abandoned, 1860	5; 7 (149)

Vessel Name	Year Built	Tons	Builder	Owners	Engine Type	Dimensions	Remarks	Source
<i>Monticello</i> (A*)	1848	364 8/95	L.D. Custin, Fairport, OH	Col. D. Russell	Two 18" x 34" engines (Shepard Iron Works, Buffalo, NY)	151'9" x 20'4" x 10'2"	Wrecked, Sep. 25, 1851 (off Keweenaw Peninsula, Lake Superior)	5; 6; 7 (149)
<i>Moore, Franklin</i> (A*)	1848	192.27 [300]	Eber B. Ward, Newport, MI	Eber B. Ward, et al	Vertical walking beam (Detroit Iron Co., Detroit, MI- from <i>Huron</i> , 1839)	132'3" x 19' x 7'11.75"	Converted to barge, Sep. 19, 1864; retired, 1873	2; 5; 7 (76)
<i>Morton, Julius D.</i> (A*)	1848	472 90/95 [400]	A.C. Keating, Monroe, MI [Toledo, OH]	William M. VanBrunt	High pressure	167'5" x 26'4" x 11'3"	Foundered, Aug. 13, 1873 (off Bar Point, Lake Erie)	2; 5; 7 (118)
<i>Ogontz</i> (A†)	1848	343 37/95	Moses & Sanford, Cleveland, OH	C.W. Marsh, et al	(Edward Reese)	152'7" x 22'9.5" x 10'3.5"	Converted to bark, Aug. 5, 1861; wrecked, 1862	5; 7 (161)
<i>Ohio</i> (A†)	1848	441 66/95 [442]	George W. Jones; L.D. Burnell [Burnett], Black River, OH	Hiram Niles, et al [Isaac L. Hewitt, William A. Adain]	Direct-acting (Cuyahoga Steam Furnance Co., Cleveland, OH)	159'4" x 25'9" x 11'5" [149' x 26' x 11']	Boiler explosion, Nov. 6, 1859 (off Long Point)	3 (II:177); 5; 6; 7 (162)
<i>Ottawa</i> (C*)	1848	316	Augustin Cantin, Montreal, QC					5
<i>Pacific</i> (A*)	1848	462 39/95 [500]	John L. Wolverton, Newport (Marine City), MI	Samuel & Eber B. Ward	44" x 120" vertical walking beam, low pressure (Cuyahoga Steam Furnance Co., Cleveland, OH)	176'10" x 27'6" x 10'1"	Converted to bark, 1855; wrecked, Sep. 29, 1867 (near Grand Haven, MI)	2; 5; 7 (167)
<i>Petrel</i> (A†)	1848	227 55/95	Joseph Arnold, Port Huron, MI	Joseph, Joshua, and Joel Kelsey		118'1" x 23'7" x 8'9"	Wrecked, Oct. 3, 1850 (Ashtabula, OH)	5; 6; 7 (171)
<i>Queen City</i> (A*)	1848	906 [1000]	Bidwell & Banta; Jacob W. Banta (carpenter), Buffalo, NY	Charles H. Reed, et al	56" x 108" crosshead, low pressure (from <i>Buffalo</i> , 1837)	242' x 30'7" x 12'7"	Converted to barge, Jul. 25, 1862; abandoned, Aug. 16, 1863 (near Lakeport, MI)	2; 3 (V:233); 5; 7 (179)

Vessel Name	Year Built	Tons	Builder	Owners	Engine Type	Dimensions	Remarks	Source
<i>Reindeer</i> (A†)	1848		Grand Haven, MI			61' x 57'7" x 5'9"	Foundered, Nov. 3, 1879 (off Lincoln Park, IL)	5
<i>Republic</i> (A†)	1848	466 88/95 [460]	Alvin A. & Samuel W. Turner, Cleveland, OH	N.C. Winslow, et al	(Cuyahoga Steam Furnance Co., Cleveland, OH)	172'7" x 24'2" x 11'2"	Burned, Oct. 3, 1857 (Sandusky, OH)	5; 6; 7 (183)
<i>Saginaw</i> (A*)	1848	350					Converted to propeller, 1893	5
<i>Sandusky</i> (A†)	1848	370	George S. Weeks, Buffalo, NY	Gelston & Evans	18" x 34", high pressure	139'6" x 25'4" x 11'2"	Stranded, 1856; burned, Oct. 1857 (near Conneaut, OH)	5; 6; 7 (194)
<i>Schuyler, M. & V.</i> (A†)	1848	16 77/95	Samuel W. Weyard (Heyard?), Albany, NY	Edward B. Ellis Co.		45' x 10'2" x 4'		5
<i>Sciota</i> (A†, aka <i>Scioto</i> ; <i>Scotia</i>)	1848	389 32/95	Eli Bates, Huron, OH	William Wright, et al	23" x 42" Corliss engine	154'5" x 24' x 11'	Collided w/ propeller <i>Arctic</i> , Sep. 2, 1864 (near Dunkirk, NY)	5; 6; 7 (196)
<i>Scotland</i> (C*)	1848		Kingston, ON				Wrecked, 1861	5
<i>St. Helen</i> (C*)	1848	100	Augustin Cantin, Montreal, QC				Grounded, May 13, 1872 (Cedar Rapids)	5
<i>St. Jean Baptiste</i> (A*, aka <i>Bouquet</i>)	1848	93 [77]	Essex, NY			82' x 18'	Rebuilt several times; abandoned, 1858	5; 7 (24)
<i>St. Lawrence</i> (A†)	1848	336.115	George S. Weeks, Oswego, NY	M.W. Browne		125'3" x 25'4" x 10'6"	Burned, Oct. 19, 1878	5; 7 (191)
<i>St. Lawrence</i> (C*)	1848	214.15	E.D. Merritt, Montreal, QC	William Darkyon		147' x 24'5" x 8'	Broken up, 1866	5
<i>Surprise</i> (A*)	1848	90 32/95	Jasper Parish, Grand Rapids, MI	Henry P. Yale, Warren P. Mills		130' x 18' x 4'		5
<i>Western Miller</i> (C†)	1848	114	Edward Leroy Cull, Toronto, ON	Gooderham & Worts	Two engines	136' x 23' x 11'	Converted to barge, 1860	5

Vessel Name	Year Built	Tons	Builder	Owners	Engine Type	Dimensions	Remarks	Source
<i>Allegheny</i> (A†)	1849	468 2/95	Luther Moses, Cleveland, OH	David Morgan, Jr., Lemuel Weeks, Luther Moses, et al [American Transportation Co.]	Direct-acting, high pressure	177'10" x 25' x 10'11"	Wrecked, 1855	3 (V:7); 5; 6; 7 (7)
<i>Archimedes</i> (A*)	1849	49 78/95	Thomas C. Thompson, Chicago, IL	Ossian & Samuel Guthrie		61'10" x 24'2" x 4'2"	Abandoned, 1856	5; 7 (12)
<i>Buena Vista</i> (A‡)	1849		Saginaw, MI	Daniel, Fitzhugh, et al		100' x 20' x 4'		5
<i>Clay, Henry</i> (A†)	1849	221 78/95 [316]	Aaron Root, Solomon Ruggles; Ruggles & Shupe (carpenters), Milan, OH	Aaron Root, Solomon Ruggles, et al	(Cuyahoga Steam Furnance Co., Cleveland, OH)	107'6" x 22'7.5" x 9'11" [134' x 23' x 11']	Rebuilt, 1850; foundered, Oct. 25, 1851 (off Long Point)	5; 6; 7 (94)
<i>Crescent</i> (A*)	1849	72.23	E.D. Merritt, Montreal, QC	Charles Tate		172'3" x 22'5" x 7'7"		5
<i>Dolphin</i> (A*)	1849	42 90/95	Amos Brown, Detroit, MI	Amos Brown		85' x 20' x 4'	Abandoned, 1851	5; 7 (56)
<i>Fashion</i> (C*)	1849	370 [234]	Chateauguay, QC			134' x 24' x 7'7"	Broken up, 1871	5
<i>Hibernia</i> (A*, aka <i>Trafalgar</i>)	1849	249	Louis Shickluna, St. Catherines, ON	R. Harris, John Young		133'7" x 23'1" x 8'9"	Rebuilt/renamed, 1861	5
<i>Illinois</i> (A†)	1849	430 55/95 [530]	Bidwell & Banta; Jacob W. Banta (carpenter), Buffalo, NY	William Dickenson, William Wells, et al	Vertical direct-acting, high pressure (Shepard Iron Works, Buffalo, NY)	182' x 27'8" x 11'	Collided w/ propeller <i>Dean Richmond</i> , Jun. 29, 1865 (off Point Pelee, ON)	3 (VI:147); 5; 6; 7 (100)
<i>Keystone State</i> (A*)	1849	1500 [1354]	Bidwell & Banta, Buffalo, NY	Charles M. Reed	65" x 120", 500hp vertical walking beam	288' x 35' x 14' [279' L.]	Foundered, Nov. 10, 1861 (off Port Austin, MI)	2; 5; 6; 7 (121)
<i>Lady Elgin</i> (C*, aka <i>Laprairie</i>)	1849	85.63	Alexander Young, Montreal, QC	Charles Tate		172'5" x 23'4" x 7'8"	Retired, 1866	5
<i>Lady Simpson</i> (C*)	1849	247	Augustin Cantin, Montreal, QC					5

Vessel Name	Year Built	Tons	Builder	Owners	Engine Type	Dimensions	Remarks	Source
<i>Marion</i> (C*, aka <i>John Gartshore</i>)	1849	100	Reed, Garden Island, ON	M.W. Browne				5
<i>Mayflower</i> (A*)	1849	1354 29/95 [1300]	J. Lupton, Detroit, MI	Michigan Central Railroad Co.	72" x 132" vertical walking beam (Hogg & Delamater, Phoenix Foundry, NY)	283'2" x 35'7.5" x 13'9.5" [288' x 35' x 12']	Grounded, Nov. 20, 1854 (Point Pelee, ON)	2; 3 (II:141); 5; 6; 7 (141)
<i>New Era</i> (C*, aka <i>Empress</i>)	1849	263	George Thurston, Kingston, ON	O.S. Gildersleeve [Henry Gildersleeve]	44" x 120" vertical walking beam	172' x 23' x 9'	Rebuilt/renamed, 1862; burned, Mar. 1868 (Kingston, ON)	3 (III:247); 5; 6
<i>Niagara</i> (A†)	1849	450.62	Roderick Calkins, Ohio City (Cleveland), OH	Ansel R. Cobb, et al		173'4" x 24'4" x 11'1"	Converted to barge, May 14, 1867	5; 7 (157)
<i>Niagara</i> (A*)	1849		Dickey & Doyle, Dayton, OH		(later used in <i>J.K. White</i> , 1868)		Wrecked, 1868	5
<i>Novelty</i> (C*)	1849	100	Quebec, QC					5
<i>Peninsula</i> (A†)	1849	354.79 [355]	J.P. Arnold [P. Lester], Vickers Landing (Marysville), MI	John T. Hunt, Henry M. Roby		154'7" x 22' x 10'5"	Wrecked, Nov. 15, 1854 (near Eagle River, MI)	5; 6; 7 (170)
<i>Prescott</i> (C*)	1849	258	Delano Dexter Calvin, Garden Island, ON	Hooker, Jacques, & Co.		138' x 20'3" 9'3"	Retired, 1870	5
<i>Reynolds, M.F.</i> (A†)	1849	69 [100]	Rochester, NY				Abandoned, 1853	5; 7 (133)
<i>Spaulding, M.B.</i> (A†)	1849	419	Jones & Bidwell; Frederick N. Jones (carpenter), Buffalo, NY	James C. Evans, et al		152'4" x 25'2" x 11'6.5"	Converted to barge, 1863; foundered, 1879	5; 6; 7 (133)
<i>St. Lawrence</i> (C*)	1849	298	William Perkins, Montreal, QC					5
<i>Telegraph</i> (A*)	1849	181.73	Jason W. Abbott, Truago (Trenton), MI	Jason W. Abbott		130'2" x 18'1" x 8'	Collided w/ schooner <i>Marquette</i> , Aug. 2, 1858 (off Cleveland, OH)	2; 5; 6; 7 (209)

<i>Vessel Name</i>	<i>Year Built</i>	<i>Tons</i>	<i>Builder</i>	<i>Owners</i>	<i>Engine Type</i>	<i>Dimensions</i>	<i>Remarks</i>	<i>Source</i>
<i>Troy (A†)</i>	1849	340 4/95	Seth W. Johnson [Lafrinier & Stevens; Lafrinier & Moses], Cleveland, OH	Luman Parmalee, Hiram Kramer, et al	Direct-acting, high pressure (Cleveland Boiler Works, Cleveland, OH)	163' x 21'1.5"x 10'2"	Foundered, Oct. 24, 1859 (off Point Aux Barques, MI)	3 (VI:311); 5; 6; 7 (215)
<i>Utica (A*)</i>	1849	59 [56]	Sackets Harbor, NY				Wrecked, Apr. 17, 1850 (near Port Ontario, NY); abandoned, 1851	5; 6; 7 (219)
<i>Belle (A*)</i>	1850	240.02	Bidwell & Banta; Jacob W. Banta (carpenter), Buffalo, NY	William A Abell, et al	Two engines, low pressure	142' x 21'8" x 8'2"	Foundered, May 1852 (off Cape Croker, Georgian Bay)	5; 6; 7 (19)
<i>City of Hamilton (C*)</i>	1850	240 918/3500	David Tate [Peter Beupre], Bath, ON	Gildersleeve, et al [G.H. Davy]	Crosshead	156' x 24'7" x 8'6" [162' x 24'4" x 8'4"]	Abandoned, 1877	3 (III:73); 5
<i>Dart (A*)</i>	1850	297	Trenton, MI					2
<i>Dover (C*, aka Georgina; Georgiana)</i>	1850	54 [81]	D. McSwain, Port Dover, ON	D. McSwain		92' x 15' x 5'	Rebuilt/renamed several times; abandoned, 1895	2; 5
<i>Empire (A*)</i>	1850		Henry Steele, Grand Rapids, MI					5
<i>Highlander (C*)</i>	1850	162 [320]	Augustin Cantin, Montreal, QC	Hooker & Co.		173' x 40'	Converted to barge, 1863; burned, Dec. 9, 1871 (Garden Island, Lake Island)	5; 6
<i>Kent, Henry A. (A†)</i>	1850	442 27/95	Frederick N. Jones [F.W. Jones], Buffalo, NY	James C. Evans, et al		162'5" x 25'2" 11'4"	Burned, May 19, 1854 (off Port Colborne, ON)	5; 6; 7 (94)
<i>Kossuth (A*)</i>	1850	178 60/95 [118]	Henry A. Chase, Tonawanda, NY	P.C. Russell, et al		97' x 18'8" x 7'	Wrecked, 1858	5; 7 (122)

Vessel Name	Year Built	Tons	Builder	Owners	Engine Type	Dimensions	Remarks	Source
<i>Mithune</i> (A*, aka <i>Northerner</i> , <i>State of Virginia</i>)	1850	905	George S. Weeks, Oswego, NY			232' x 30'5" x 12'5"	Rebuilt, 1865; broken up, 1874	5; 7 (160)
<i>Ocean</i> (A*)	1850	1052.33 [900]	John L. Wolverton [Samuel Ward], Newport, MI	Eber B. Ward, S. Gardner, Chaires Blodgett	60.5" x 132" vertical walking beam (T.F. Secor & Co., NY- from <i>Canada</i> , 1846)	245'4" x 33'6" x 13'3"	Converted to sloop barge, Nov. 12, 1862; wrecked, Oct. 20, 1873 (near Point Aux Barques, MI)	2; 3 (III:263); 5; 7 (161)
<i>Saginaw</i> (A†)	1850	407.24	Benjamin B. Jones, Ohio City (Cleveland), OH	Franklin Millard	(Bell & McNish, Buffalo, NY)	155.083' x 26' x 10.67'	Converted to barge, Jul. 30, 1869; abandoned, 1887	5; 7 (190)
<i>Schuyler, Thomas</i> (A†)	1850	74	Athens, NY				Abandoned, 1886	5; 7 (211)
<i>Wave</i> (A*)	1850	207.91	Charles Jennisin, Algonac, MI			137' x 21'6" x 8'	Stranded, Nov. 7, 1851 (near Grand River, ON)	5; 6; 7 (227)
<i>Arabian</i> (C*)	1851	350 [263]	Niagara Harbour & Dock Co., Niagara, ON	Andrew Heron, James Sutherland	Vertical walking beam	173' x 32' x 16' [174' x 24' x 18'4"]	Rebuilt 1863; broken up 1863	3 (III:9); 5
<i>Arctic</i> (A*)	1851	861 42/95 [867]	John L. Wolverton, Newport (Marine City), MI	Samuel & Eber B. Ward, Thomas Butlin		236'6" x 30 x 12'6"	Wrecked, May 28, 1860 (Huron Islands, Lake Superior)	2; 5; 6; 7 (12)
<i>Atlas</i> (A†)	1851	372 87/95 [375]	Bidwell & Banta, Buffalo, NY	E.C. Louis, William L. Bancroft		156'6" x 25'6.25" x 11' [153' x 25' x 11']	Stranded, Oct. 26, 1851 (near Lorain, OH)	5; 6; 7 (15)
<i>Bay City</i> (A*)	1851	479	Trenton, MI					2
<i>Berlin</i> (A‡)	1851	54	Oshkosh, WI				Abandoned, 1857	5; 7 (21)
<i>Brantford</i> (C†, aka <i>Calabria</i>)	1851	222	Louis Shickluna, St. Catherines, ON	Holcomb & Henderson		153'5" x 23'4" x 9'7"	Converted to steambarge, 1873	5

Vessel Name	Year Built	Tons	Builder	Owners	Engine Type	Dimensions	Remarks	Source
<i>Brooks, J.W.</i> (A†)	1851	312 45/95 [322]	William Gooding, Detroit, MI	Joshua Kelsey, et al		135'9" x 25'3" x 9'9"	Foundered, Nov. 4, 1856 (off False Ducks Light)	5; 6; 7 (107)
<i>Buckeye State</i> (A*)	1851	1274 17/95	George W. Jones, Cleveland, OH	J.B. Philips	81" x 132", low pressure	273'1" x 22'7" x 14'3"	Burned, 1857 (Buffalo); converted to coal barge, 1863	2; 5; 7 (26)
<i>Buffalo</i> (A†)	1851	689 21/95	Bidwell & Banta, Buffalo, NY	G.B. Waldbridgeo, et al	32" x 48", high pressure	202' x 29'1.5" x 12'2"	Converted to steambarge, 1871; possibly abandoned, 1889	5; 7 (26)
<i>Caspian</i> (A*)	1851	921 51/95 [1050; 951]	Eber B. & Samuel Ward; John L. Wolverton (carpenter), Newport, MI	Samuel & Eber B. Ward	60" x 120" vertical beam engine (from <i>Canada</i> , 1846)	251'8" x 31'4" x 12' [254' x 32' x 10']	Wrecked in storm, Jul. 1, 1852 (near Cleveland, OH)	2; 3 (VI:37); 5; 6; 7 (31)
<i>Champion</i> (C*)	1851	597	Augustin Cantin, Montreal, QC	Holcom & Henderson	Vertical walking beam	175'8" x 24'3" x 10'7"	Laid up, 1877; broken up, 1880	5
<i>Enterprise</i> (C*)	1851	45	Quebec, QC			100' x 18' x 6'	Burned, Apr. 20, 1858 (Levis ,QC)	5
<i>Forest City</i> (A†)	1851	515 39/95	Benjamin B. Jones, Ohio City (Cleveland), OH	H.B. Pheatt, et al		177' x 25'1" x 12'	Collided w/ schooner <i>Asia</i> , Sep. 21, 1855 (Grand Traverse Bay)	5; 6; 7 (74)
<i>Fox</i> (A*, aka <i>F. Drake</i>)	1851	102 [162]	Vincent Bidwell, Buffalo, NY	Vincent Bidwell, Benjamin Bidwell, Jacob W. Banta	(later used in <i>J.B. Smith</i> , 1864)	99'6" x 16'2" x 6'8" [100' x 16' x 7']	Burned, Oct. 20, 1863 (Newport, MI)	5; 6; 7 (75)
<i>Franklin</i> (A†)	1851	39 32/95	Francis S. Low, Albany, NY	Francis S. Low		61' x 14'3" x 5'	Abandoned, 1856	5; 7 (76)
<i>Fremont</i> (A*)	1851	66 33/95 [95]	Daniel Dibble; Joseph M. Keating (carpenter), Plaster Bed, OH	William B. Lockwood, George B. Smith		113'8" x 12'6" x 4'9" [114' x 19' x 5']	Burned, Jun. 10, 1858 (Sandusky Bay, OH)	5; 6; 7 (77)
<i>Howard, O.S.</i> (A*)	1851	63 29/95	Peter Lamoree, Oswego, NY	Alvin Bronson; A.C. Mattoon	Two 14" x 42" engines, high pressure	82'6" x 14'7" x 5'10"	Abandoned, 1855	5; 7 (160)

Vessel Name	Year Built	Tons	Builder	Owners	Engine Type	Dimensions	Remarks	Source
<i>Ida</i> (C*)	1851	60 54/95 [110 60/95]	Augustin Cantin, Montreal, QC					5
<i>Lady Elgin</i> (A*)	1851	1037.78 [819]	Bidwell & Banta; Jacob W. Banta (carpenter), Buffalo, NY	Aaron D. Patchin, et al	350hp vertical walking beam, low pressure [high pressure] (Bidwell & Banta, Buffalo, NY- from <i>Cleopatra</i>)	252' x 32'8" x 13' [231' x 33' x 12']	Collided w/ schooner <i>August</i> , Sep 7, 1860 (off Winnetka, IL, Lake Michigan)	2; 3 (II:129); 5; 6; 7 (123)
<i>Lathrop, John</i> (A*)	1851	45 41/95	Abraham VanSlyke, Buffalo, NY	Theodore D. Barton, et al		63' x 13'8" x 5'9"	Abandoned, 1864	5; 7 (114)
<i>Maple Leaf</i> (C*)	1851	398	John Counter; George Thurston (carpenter), Kingston, ON	Donald Bethune & Co.	52" x 132" vertical walking beam (from <i>Sovereign</i>)	173'2" x x24'7" x 18'6"	Left Lakes in 1863; sunk by Confederate torpedo (mine), 1864	5
<i>Mazeppa</i> (C*, aka <i>Farmer</i>)	1851	250	St. Catherines, ON [Kingston, ON]	Harris & John Young			Grounded, Nov. 1856 (near Southampton, ON)	2; 5; 6
<i>Minnesota</i> (A*, aka <i>Minesota</i>)	1851	749	F.N. Jones, Maumee, OH	George W. Holt, Rufus Palmer & Co.	60" x 120" side lever (Buffalo Steam Engine Works, Buffalo, NY)	235' x 30'10" x 10'8"	Wrecked, Sep. 27, 1861 (near Summer Island, Green Bay, WI)	2; 3 (II:149); 5; 6; 7 (146)
<i>Morning</i> (C*)	1851	154	C. Thompson, Holland Landing, ON					5
<i>New York</i> (A*)	1851	994 [1200]	Merrick Shipyard; John Oades (carpenter), Clayton, NY	Ontario & St. Lawrence Steamboat Co.; American Express Line	60" x 144", 450hp vertical beam engine (Henry R. Dunham & Co., New York, NY)	234'9" x 32'6" x 13'6" [225' x 46' x 13']	Burned, May 20, 1894 (off Camden, NJ)	3 (III:249); 5; 7 (157)
<i>North Star</i> (A†)	1851	67	Daniel Dibble, Sandusky, OH	L. Zistel			Abandoned, 1867	5

Vessel Name	Year Built	Tons	Builder	Owners	Engine Type	Dimensions	Remarks	Source
<i>Northerner</i> (A*)	1851	514	Samuel W. Turner, Ohio City (Cleveland), OH	Lake Superior Steamboat Co.	Vertical walking beam	186'7" x 26'8" x 10'9"	Collided w/ steamer <i>Forest Queen</i> , Apr. 21, 1856 (off Fort Gratiot Light, Lake Huron)	2; 5; 6; 7 (160)
<i>Novelty</i> (C*, aka <i>Corra Linn</i>)	1851	60	James Tibbets; Guthrie? (carpenter)	James Tibbets		120' x 16' x 8'	Renamed, 1855; grounded, 1856 (near Salmon Island Shoal)	5
<i>Ontario</i> (C*)	1851	200 [284; 283]	Molson, Sorel, QC	Hooker & Jacques		176' x 25' x 10'	Grounded, Nov. 30, 1854 (Nicholson Island, ON)	5; 6
<i>Pearl</i> (A*)	1851	251 30/95	John L. Wolverton, Newport, MI	Samuel & Eber B. Ward	Vertical beam engine	184' x 21'1" x 7'6"	Laid up, 1866; engine removed, 1867	2; 3 (IV:247); 5; 7 (169)
<i>Ploughboy</i> (C*, aka <i>T.F. Parks</i>)	1851	450 [365]	Capt. W. Eberts or J. McDermott, Chatham, ON	Capt W. Eberts, et al	42" x 48" side lever (Ward Eagle Foundry, Montreal, QC)	170' x 28' x 8'	Renamed, 1864; burned, Jun. 3, 1870 (Detroit, MI)	2; 3 (IV:255); 5; 6
<i>Protection</i> (C†, aka <i>Gore</i>)	1851	120	George H. Notter, Brockville, ON	H. Jones & Co.			Renamed, 1861	5
<i>Queen</i> (C*)	1851	64	Dunnville, ON				Converted to barge, 1863	2; 5
<i>Queen of the West</i> (A*)	1851	439	George S. Weeks, Oswego, NY	Built for Canadian Buyers		212' x 26' x 11'	Burned, Jul. 11, 1853 (Hamilton, ON)	5; 6
<i>Ruby</i> (A*)	1851	251.32	John L. Wolverton, Newport, MI	Eber Ward II, Franklin Moore, George Foote	38" x 96" or 42" x 108", low pressure (Detroit Locomotive Workes, MI)	164 x 21'1" x 7'6"	Dismantled, 1865	5; 7 (189)
<i>Swan</i> (A*)	1851	209 13/95	Charles B. Howard, Detroit, MI	Charles B. Howard & Co.		138'9" x 21'3" x 7'3"	Abandoned, 1861; sold, 1866	5; 7 (206)
<i>United</i> (A*)	1851	71 66/95	Oren Davenport, Port Huron, MI			87'11" x 15'3" x 5'8"	Converted to lumber barge, 1874	5

Vessel Name	Year Built	Tons	Builder	Owners	Engine Type	Dimensions	Remarks	Source
<i>Vermont</i> (A†)	1851	257.18 [255]	Moses & Sanford, Ohio City (Cleveland), OH	Chamberlain & Crawford		136'6" x 21'3" x 9'3"	Collided w/ propeller <i>Marquette</i> , Nov. 1, 1863 (near Long Point)	5; 6; 7 (220)
<i>Badger State</i> (A*)	1852	40.83						5
<i>Banshee</i> (C†, aka <i>Hero</i>)	1852	199 [166]	George N. Ault, Bath, ON [Portsmouth, ON]	Maxwell, Faigham, & McRay	(Kingston Foundry Co., Kingston, ON)	119'4" x 18' x 8'3"	Renamed, 1860; foundered, Aug. 21, 1861 (near False Ducks Island)	5; 6
<i>Bay State</i> (A†, aka <i>Ontario</i>)	1852	372 4/95	Bidwell & Banta, Buffalo, NY	Central Vermont Railway	High pressure	137'3" x 25'7" x 11'4"	Foundered, Nov. 2, 1862 (off Oswego, NY); rebuilt/renamed, 1867	5; 6; 7 (18)
<i>Boston</i> (C*)	1852	235	Quebec, QC	Ogdensburg Railroad Co.		169' x 23' x 10'	Left Lakes, 1863 or 1864; Atlantic coast blockade- runner	5
<i>Bruce, B.F.</i> (A†)	1852	168 63/95 [169]	Laveyea & Co.; John Chapman (carpenter), Buffalo, NY	John Chapman, George W. Tifft		110' x 20'6" x 8'	Burned, Aug. 9, 1862 (off Point Stanely, ON)	5; 6; 7 (16)
<i>Bucephalus</i> (A†)	1852	493 42/95	F.J. Pervis [R.J. Case?], Perrysburg, OH	Erasmus D. Peck, John H. Hollister, Squire Alexander		169' x 28' x 11'	Foundered, Nov. 13, 1854 (off Point Aux Barques, MI)	5; 6; 7 (26)
<i>Canada</i> (C*, aka <i>Canada No. 2</i>)	1852	137	St. Antoine, QC		45hp vertical walking beam, low pressure	108' x 18'	Grounded, broken up, Nov. 28, 1865	5
<i>Cataract</i> (A†)	1852	393 71/95 [352]	Francis N. Jones [Benjamin B. Jones], Buffalo, NY	Hiram Niles [Ontario Steamboat Co.]		150' x 25' x 11'	Burned, Jun. 16, 1861 (off Erie, PA)	5; 6; 7 (31)
<i>City of Oswego</i> (A†)	1852	357	George S. Weeks, Buffalo, NY	Dwight C. Bancroft [Northern Transportation Co.]		138' x 24'8" x 11'2"	Collided w/ steamer <i>America</i> , Jul. 12, 1852 (off Cleveland, OH)	5; 6; 7 (37)

Vessel Name	Year Built	Tons	Builder	Owners	Engine Type	Dimensions	Remarks	Source
<i>Cleveland</i> (A*)	1852	574 30/95	John L. Wolverton, Newport, MI	Samuel & Eber B. Ward, et al	Side lever (Degraff & Kendrick, Detroit, MI) [48 x 11' vertical beam engine- 1852]	196'7" x 27'8" x 11" [195'7" x 27'8" x 11'8"]	Grounded, Oct. 28, 1864 (off Two-Hearted River, MI)	2; 3 (II:47); 5; 6; 7 (39)
<i>Covell, Asa</i> (A†)	1852	19 [20]	VanSlyke & Notter, Buffalo, NY	Isaac Kirkland	50hp		Boiler explosion, Jun. 6, 1869 (Cleveland, OH)	5; 6; 7 (14)
<i>Dobbins, Anna</i> (A†)	1852	172	Mills & Walsh, Buffalo, NY	Thomas D. Dole	24" x 26", 292hp, high pressure	97'8" x 18' x 9'	Grounded, Sep. 24, 1886 (Saginaw Bay, MI)	5; 6; 7 (11)
<i>Doctor Thorn</i> (A*)	1852	36	Albany, NY				Abandoned, 1859	5; 7 (56)
<i>Eclipse</i> (A†)	1852	136 12/95	George H. Notter, Buffalo, NY	Edward R. Blackwell	92hp	93'10" x 18'2" x 8'7"	Grounded, Oct. 29, 1874 (off Black River, OH)	5; 7 (59)
<i>Edith</i> (A†, aka <i>E.B. Hale</i>)	1852	549 29/95	Francis N. Jones, Buffalo, NY	Asa E. Hart, et al	(Fulton Iron Works, NY)	180'10" x 26'6" x 12'	Converted to barge, May 17, 73; abandoned, 1879	5; 7 (60)
<i>Experiment</i> (C†)	1852	89	Land & Routh, Hamilton, ON	Land & Routh		99' x 17' x 5'8"	Collided w/ propeller <i>Wabash Valley</i> , Jul. 18, 1858 (Detroit River)	5
<i>Follett, Frederick</i> (A†)	1852	67 63/95	L.S. Wafford, Buffalo, NY	Theodore D. Barton, Abram Slyke		70'10" x 15'3" x 6'10"	Abandoned, 1859	5; 7 (77)
<i>Forest City</i> (A*, aka <i>Bay City</i>)	1852	479 93/95 [480]	Patrick Bates [Eli Bates], Trenton, MI	Ira Davis, Samuel & Eber B. Ward	44" x 120", low pressure	199' x 26'10" x 9'3.5"	Sank, May 20, 1862; dismantled, 1868	5; 6
<i>Forest Queen</i> (A†)	1852	467	Moses & Quayle, Ohio City (Cleveland), OH	Heber Squer, H.A. Riley, A.B. Sprague		162' x 25'8" x 11'9.5" [142' x 26' x 12']	Crushed by ice, Dec. 1868 (Pigeon Bay)	5; 6; 7 (74)
<i>General Scott</i> (A*)	1852	63 72/95	Darius Cole, Saginaw, MI	Darius Cole, et al		105' x 12'5" x 5'	Crushed by ice, Mar. 21, 1853 (Saginaw River, MI); abandoned, 1854	5; 6; 7 (82)

Vessel Name	Year Built	Tons	Builder	Owners	Engine Type	Dimensions	Remarks	Source
<i>Golden Gate</i> (A*)	1852	770 48/95 [771]	Bidwell & Banta, Buffalo, NY	Watson A. Fox, Elijah K. Bruce	Square crosshead, high pressure (Cuyahoga Steam Furnance Co., Cleveland, OH- from <i>G.P. Griffith</i> , 1848)	224'4" x 29'6" x 12'1.5" [222' x 30' x 12']	Wrecked, Nov. 30, 1856 (Erie, PA)	2; 5; 6; 7 (86)
<i>Granite State</i> (A†)	1852	351 73/95	Moses & Quayle, Ohio City (Cleveland), OH	Philo Camberlain, J.W. Crawford [Northern Transportation Co.]	Oscillating direct-acting, high pressure (Cuyahoga Steam Furnance Co., Cleveland, OH)	137'4" x 24'10" x 11' [136'7" x 24' x 16'6"]	Foundered, Oct. 3, 1881 (off Sturgeon Bay, WI)	3 (III:165); 5; 6; 7 (88)
<i>Huron</i> (A*)	1852	348 36/95	John L. Wolverton, Newport, MI	Samuel & Eber B. Ward	31" x 96" crosshead	165' x 23'6" x 9'4"	Abandoned, 1877	2; 3 (III:173); 5; 7 (99)
<i>Iowa</i> (A*)	1852	981 53/95	Francis N. Jones, Buffalo, NY	James Evans, et al; George W. Holt, Rufus C. Palmer	Horizontal engine, 48" x 36", high pressure (Shepard Iron Works, Buffalo, NY- from <i>New Orleans</i> , 1848)	242' x 31'4" x 13'4"	Converted to barge, 1867; in service, 1878	5; 7 (102)
<i>Kaloolah</i> (A*, aka <i>Collingwood</i>)	1852	443 [621; 532]	F.N. Jones [Bidwell & Banta], Buffalo, NY	Aaron D. Patchin, et al	Vertical walking beam, high pressure (Shepard Iron Works, Buffalo, NY- from <i>Lexington</i> , 1838)	188' x 25' x 9'9"	Renamed, 1853; foundered, Aug. 22, 1862 (off Southampton, ON)	2; 3 (III:205); 5; 6; 7 (119)
<i>Martin, Morgan L.</i> (A*)	1852	71 1/95	Green Bay, WI			117'6" x 16'4" x 3'10"	Abandoned, 1858	5; 7 (149)
<i>Mayflower</i> (A†)	1852	623 77/95 [415]	Benjamin B. Jones, Buffalo, NY	P.S. Sternberg & Co., et al		185' x 28' x 12'7"	Converted to steambarge, 1876; grounded, Nov. 4, 1883 (near Buffalo, NY)	5; 6
<i>Michigan</i> (A†)	1852	354 2/95 [234; 180]	Presley & Stevens; A.C. Keating (carpenter) [Moses & Quayle?], Ohio City (Cleveland), OH	P. Chamberlain, et al		138' x 24'10" x 11'	Burned, Dec. 3, 1888 (Kelley's Island, Lake Erie)	5; 6; 7 (145)
<i>Michigan</i> (A*)	1852		Detroit, MI					2

Vessel Name	Year Built	Tons	Builder	Owners	Engine Type	Dimensions	Remarks	Source
<i>Milwaukee</i> (A†)	1852	614 44/95 [616]	Moses & Quayle, Cleveland, OH	Rufus Palmer, Horatio Holt, et al	28" cyl.	185'3" x 28'11" x 12'5"	Collided w/ schooner <i>J.H. Tiffany</i> , Nov. 29, 1859 (Straits of Mackinac)	5; 6; 7 (145)
<i>Montmorency</i> (C*)	1852	396	Vaughn, Quebec, QC					5
<i>Nile</i> (A†)	1852	650 8/95	Moses & Quayle, Ohio City (Cleveland), OH	Charles H. Lee, et al	28" x 42", low pressure (Buffalo Steam Engine Works, Buffalo, NY)	190' x 28'2" x 12'8"	Boiler explosion, May 21, 1864 (Detroit, MI)	5; 6; 7 (158)
<i>Northern Indiana</i> (A*)	1852	1475 [1470]	Bidwell & Banta, Buffalo, NY	Michigan Southern Railroad Co.	72" x 144" vertical walking beam, low pressure (Morgan Iron Works, New York, NY)	300'6" x 36'10" x 13'8" [301' x 37' x 14']	Burned, Jul. 17, 1856 (off Point Pelee, Lake Erie)	2; 3 (II:173); 5; 6; 7 (159)
<i>Ocean Wave</i> (C*)	1852	241 [182]	Molson & Merrit; E.D. Merritt (carpenter), Montreal, QC	Hon. John Molson	Vertical walking beam	174'2" x 26' x 10'6" [174'2" x 26' x 11'6"]	Burned, Apr. 30, 1853 (near False Duck Island, Lake Ontario)	3 (II:175); 5; 6
<i>Ogdensburg</i> (A†)	1852	352	Moses & Quayle, Ohio City (Cleveland), OH	P.E. Chamberlain, J.H. Crawford		137'6" x 24'11" x 11'	Collided w/ steamer <i>Snowbird</i> , Sep. 30, 1864 (off Fairport, OH)	5; 6; 7 (161)
<i>Ontario</i> (C†)	1852	52	Beckett, Hamilton, ON					5
<i>Orange County</i>	1852	150						5
<i>Peytona</i> (A*)	1852	109 24/95	Neenah, WI				Lost, 1859	5; 7 (171)
<i>Potent</i> (A†)	1852	31 2/95	James Naggert, Buffalo, NY	James Naggert		60' x 13'4" x 4'3"	Abandoned, 1854	5; 7 (177)
<i>Prairie State</i> (A†)	1852	352.64	Stevens & Presley, Ohio City (Cleveland), OH	Chamberlain & Crawford [Northern Transportation Co.]	256hp	137'6" x 24'10" x 11'	Converted to barge, May 3, 1878; wrecked, 1879	5; 6; 7 (177)
<i>Sorel</i> (C*)	1852	20	Sorel, QC			90'6" x 13'7" x 7'		5

Vessel Name	Year Built	Tons	Builder	Owners	Engine Type	Dimensions	Remarks	Source
<i>Southern Michigan</i> (A*)	1852	1470 54/95	Bidwell & Banta, Buffalo, NY	Michigan Southern Railroad Co.	72" x 144" vertical walking beam (Morgan Iron Works, New York, NY)	300'9" x 36'11" x 13'7"	Laid up, 1857; engine removed, 1863	2; 3 (II:241); 5; 7 (201)
<i>Star</i> (C*)	1852		Montreal or Chateauguay, QC		31" x 96", 45hp vertical walking beam		For sale, 1855	5
<i>Stockman</i> (A†)	1852	81 45/95	Luther Moses & Co.; Moses S. Taylor (carpenter), Cleveland, OH	John. B. Stockman		85'4" x 16'11" x 6'5"	Burned, Aug. 29, 1865 (Onekama, MI)	5; 6; 7 (204)
<i>Tift, George W.</i> (A†)	1852	82 26/95 [81]	Elias Sims, Buffalo, NY	Elias & Thomas Sims		75' x 16'4" x 7'3"	Rebuilt several times; abandoned, 1881	5; 7 (84)
<i>Traveller</i> (A*, aka <i>Traveler</i>)	1852	603 [609]	John L. Wolverton, Newport, MI	Samuel & Eber B. Ward		199'11" x 29' x 10'1"	Burned, Aug. 17, 1865 (Eagle Harbor, MI)	2; 5; 6; 7 (214)
<i>Wisconsin</i> (A†)	1852	352.63	Presley & Stevens, Ohio City (Cleveland), OH	Chamberlain & Crawford		137'6" x 24'10" x 11'	Burned, May 21, 1867 (off Cape Vincent, NY)	5; 6; 7 (234)
<i>Yates, P.W.</i> (A††)	1852	86.07	Chicago, IL	G.P. Ozier, Joseph Creole		90'9" x 17'8" x 5'3"		5
<i>Young America</i> (A†)	1852	359	Bidwell & Banta; Jacob W. Banta (carpenter), Buffalo, NY	Charles Bancroft [Northern Transportation Co.]		135'6" x 25'8" x 11' [139' x 26' x 11']	Grounded, Oct. 20, 1873 (near Oak Orchard, NY)	5; 6; 7 (235)
<i>Agawan</i> (A*)	1853	87	Sag Harbor, NY				Lost, 1854	5; 7 (4)
<i>America</i> (C*, aka <i>Monarque</i>)	1853	70					Rebuilt/renamed 1886; wrecked, Dec. 1901	5
<i>Ariel</i> (A*)	1853	165 70/95	Eli Bates, Sandusky, OH	Lockwood & Smith		124'6" x 20' x 6'7"	Burned, Jul. 20, 1868 (dock at Riverside, ON)	2; 5; 7 (13)
<i>Barton, Pliny F.</i> (A†)	1853	40 30/95	M. Laveyea, Buffalo, NY	Aaron Goodwin, William Burny		61'2" x 14'4" x 5'1"	Burned, May 31, 2865 (St. Clair River)	5; 6; 7 (166)

Vessel Name	Year Built	Tons	Builder	Owners	Engine Type	Dimensions	Remarks	Source
<i>Bay of Quinte</i> (C*)	1853	324	George Thurston, Kingston, ON	O.S. Gildersleeve & Co.	Vertical walking beam	161' x 25'6" x 8'6"	Dismantled, 1885	5
<i>Belden, Cliff</i> (A†)	1853	92 69/95	Lafrinier & Stevenson, Ohio City (Cleveland), OH	Clifford Belden, William D. Nott		74'1" 20'1.5" x 7'1"	Abandoned, 1860 (Detroit, MI)	5; 7 (39)
<i>Brunswick</i> (A†)	1853	512 20/95	George S. Weeks, Buffalo, NY	Perkins, Holley, & Johnson		164' x 28'2" x 11'9"	Foundered, Aug. 9, 1856 (off South Manitou Island)	5; 6; 7 (26)
<i>Canadian</i> (C*)	1853	368 [389]	H. & J. Jenkins; E.W. Hardison (carpenter), Chatham, ON	W. & W. Eberts	Vertical walking beam (from <i>Fashion</i> , 1847)	162' x 47' x 15'11"	Broken up, 1868	2; 5
<i>Canadian Lily</i> (C*)	1853	390	W. & W. Eberts, Chatham, ON	W. & W. Eberts				5
<i>Castor</i> (C*)	1853		Augustin Cantin, Montreal, QC	Lake St. Peter Navigation Co.		149' x 24'	Wrecked by ice, Apr. 1862 (Sorel, QC)	5
<i>Challenge</i> (A†)	1853	665	William E. Dixon, Newport (Marine City), MI	Strong & Hart, et al	(DeGraff & Kendrick, Detroit, MI)	197'5" x 28' x 12'	Boiler explosion, Jun. 22, 1853 (off Cheboygan, MI)	5; 6; 7 (32)
<i>Clifton</i> (C*)	1853	506 [247; 236]	Louis Shickluna, Niagara Harbour & Dock Co. [G. Gollyer], Chippewa, ON	Niagara Harbour & Dock Co.; Oliver T. Macklem	42" x 132" vertical walking beam, low pressure (Macklem Iron Works, Chippewa, ON)	187' x 26' x 7'6"	Converted to lumber barge, 1866	2; 3 (III:91); 5
<i>Collins, E.K.</i> (A*, aka <i>Ark</i>)	1853	942 8/95 [1095; 950]	John L. Wolverton; James Bushnell (carpenter), Newport, MI [Detroit, MI]	Samuel & Eber B. Ward	60" x 144" vertical walking beam	256' x 32'6" x 12'6" [249' x 30'3" x 12'1"]	Burned, Oct. 1854 (Detroit River); rebuilt/renamed, 1857	2; 3 (VI:105); 5; 6; 7 (58)
<i>Crescent City</i> (A*)	1853	1746 12/95 [1740]	Bidwell & Banta; Vincent Bidwell (carpenter), Buffalo, NY	Marshall O. Roberts, et al	80" x 144", 1200hp vertical walking beam (Morgan Iron Works, New York, NY)	323'8" x 39'6" x 14'	Abandoned, 1858; dismantled, 1863	2; 3 (II: 63; VI:83); 5; 7 (47)

<i>Vessel Name</i>	<i>Year Built</i>	<i>Tons</i>	<i>Builder</i>	<i>Owners</i>	<i>Engine Type</i>	<i>Dimensions</i>	<i>Remarks</i>	<i>Source</i>
<i>Dart</i> (A†)	1853	96 45/95	J. Purvis; C.V. Jenison (carpenter), Perrysburg, OH	Edward H. Munger		92'2" 17'9" x 6'3"	Converted to barge, Jun. 18, 1870; burned, Jul. 1877 (Sandwich, ON)	5; 7 (51)
<i>Dayton</i> (A†, aka <i>Oliver Cromwell</i>)	1853	366 50/95	George S. Weeks, Buffalo, NY	Henry Fitzhugh, Dewitt C. Littlejohn, S.F. Osborn	Direct-acting, high pressure (Shepard Iron Works, Buffalo, NY)	137'7" x 25'6" x 11'2"	Converted to barge, 1873; wrecked, 1888	3 (VI:93); 5; 6; 7 (52)
<i>Dunkirk</i> (A†)	1853	542 56/95	Moses & Quayle; Thomas Quayle (carpenter), Ohio City (Cleveland), OH	Risley & Squires Propeller Line		166'4.25" x 26'4" x 13'	Burned, 1877; abandoned, 1878	5; 7 (57)
<i>Echo</i> (A†)	1853	117 12/95	Bidwell & Banta; Vincent Bidwell (carpenter), Buffalo, NY	Charles L. Gagner		84'8" x 18'9" x 8'1"	Abandoned, 1862	5; 7 (59)
<i>Falcon</i> (A†)	1853	663 84/95 [664]	John L. Wolverton, Detroit, MI	J.L. Hurd & Co.	Two 300hp engines (Johnson, Wayne, & Co., Detroit, MI)	198'1" x 29'7" x 11.8"	Burned, Oct. 18, 1856 (Chicago, IL)	5; 6; 7 (70)
<i>Field, A.S.</i> (A†)	1853	115 22/95	L. Lavayea, Buffalo, NY	Seymour C. Keeler, George L. Butterfield		93' x 17' x 7'8"	Boiler explosion Jul. 6, 1860 (Detroit, MI)	5; 6; 7 (2)
<i>Fintry</i> (A†)	1853	590 41/95	John L. Wolverton, Detroit, MI	J.L. Hurd & Co.	Two 26" x 36", 250hp engines (Hyde & Co.)	198'10" x 29'9" x 10'5"	Boiler explosion, Nov. 8, 1855 (off Port Stanley, ON)	5; 6; 7 (72)
<i>Garden City</i> (A*)	1853	657	Bidwell & Banta; Vincent Bidwell (carpenter), Buffalo, NY	Capt. Erastus Crocker, et al	44" x 144" vertical walking beam	218' x 29'6" x 11' [217'3" x 29'10" x 10'6"]	Wrecked, May 16, 1854 (Les Cheneaux Reef, Lake Huron)	2; 3 (VI:123); 5; 6; 7 (79)
<i>Genesee</i> (A†)	1853	128.17	Cartwright, Rochester, NY					5
<i>Green, Mary</i> (A*)	1853	700	Trenton, MI	J. Owen, Capt. Davis, Capt. Evans		220' x 29'8" x 11'		5

Vessel Name	Year Built	Tons	Builder	Owners	Engine Type	Dimensions	Remarks	Source
<i>Illinois</i> (A*)	1853	926 72/95	Burton S. Goodsell [John L. Wolverton], Detroit, MI	Oliver Newberry	56" x 120" crosshead (from <i>Illinois</i> , 1836)	268'8" x 29' x 12'1" [255' x 29' x 13']	Wrecked, Nov. 1869 (near Lakeport, MI)	2; 3 (III:177); 5; 7 (100)
<i>International</i> (C†)	1853	474	Niagara Harbour & Dock Co. [Bidwell & Banta], Chippewa, ON [Buffalo, NY]	Buffalo, Brantford, & Goderich Railroad Co.	Side lever (Macklem Iron Works, Chippawa, ON)	160' x 32' x 10'	Burned, Dec. 3, 1854 (Buffalo, NY)	3 (VI:149); 6
<i>Jefferson</i> (A†)	1853	344 65/95	Bidwell & Banta; Jacob W. Banta, Buffalo, NY	Bancroft's Propeller Line; Charles & Edward Bancroft		137' x 25'6" x 10'7"	Wrecked, Oct. 31, 1870 (near Pentwater, MI)	5
<i>Kentucky</i> (A†)	1853	366 2/95	George S. Weeks, Buffalo, NY	H. Fitzhugh & Co.		137'5" x 25'6" x 11'2"	Converted to barge, Sep. 27, 1867	5; 7 (120)
<i>Louisville</i> (A†)	1853	366 2/95	James Carrick [George S. Weeks], Buffalo, NY	Crawford & Co.	Vertical direct-acting, high pressure (Shepard Iron Works, Buffalo, NY)	140' x 25' x 11' [137'5" x 25'6" x 11'2"]	Burned, Sep. 29, 1857 (off Calumet, IL)	3 (III:211); 5; 6; 7 (131)
<i>May Queen</i> (A*)	1853	688.29 [694]	Eli Bates [Alva C. Bovee], Trenton, MI	John Owen, et al	45" x 132", 450hp vertical walking beam (Cuyahoga Steam Furnance Co., Cleveland, OH)	217'8" x 29'9" x 11' [220' x 28'3" x 11'5"]	Rebuilt, 1865; abandoned, Oct. 31, 1868 (Lake Michigan)	2; 3 (VI:183); 5; 6; 7 (141)
<i>Michigan</i> (A*)	1853	82	Capt. Parks, Grand Rapids, MI		18" x 65", 82hp (Degraff & Kendrick, Detroit, MI)	123' x 15' x 5'	Burned, Jul. 11, 1860 (Grand Haven, MI)	5; 6; 7 (145)
<i>Mississippi</i> (A*)	1853	1829	Francis N. Jones, Buffalo, NY	Morris Hazard, et al	81" x 144" vertical walking beam (Allaire Iron Works, New York, NY)	326'8" x 40'1" x 14' [326'8" x 40'10" x 14']	Laid up, 1857; engine removed, 1863	2; 3 (II:151); 5
<i>Moffatt, George M.</i> (C*)	1853	361 [350]	John Waddell, Chatham, ON	John Waddell		135' x 24' x 11'	Grounded, Dec. 10, 1864 (near Bowmanville, ON)	5; 6

Vessel Name	Year Built	Tons	Builder	Owners	Engine Type	Dimensions	Remarks	Source
<i>Napolean</i> (C*)	1853		Hamilton, ON		Two 18" x 72" horizontal engines	110' x 32' x 4'	Grounded, wrecked, Dec. 2, 1856 (near Hamilton, ON)	5; 6
<i>New England</i> (A†, aka <i>Magnet</i>)	1853	351.71	Luther Moses, Ohio City (Cleveland), OH	Hiram Niles, John R. Wheeler, L.W. Steele		134'4" x 20'5" x 11'	Converted to bark, 1871	5; 7 (155)
<i>Northern Michigan</i> (A†, aka <i>Ontario</i>)	1853	359.26	Bidwell & Banta, Buffalo, NY	Charles Bancroft		137' x 25' x 11'	Renamed, Feb. 26, 1857; converted to barge, Sep. 30, 1865; wrecked, 1872	5; 7 (159)
<i>Ottawa</i> (A*)	1853	316.63	Joseph A. Jenkins, Detroit, MI	George B. Russell, Henry N. Walker		121' x 30'4" x 9'8"	Abandoned, 1867; broken up, 1871	5; 7 (166)
<i>Owego</i> (A†)	1853	483.59	Roderick Calkins & John W. Searles, Cleveland, OH	Alanson R. Robinson [Squires, Risley & Vorce]	Two direct-acting engines, high pressure	168'7.5" x 28'2" x 10'9"	Grounded, Nov. 29, 1867 (off Barcelona, NY)	3 (IV:241); 5; 6; 7 (166)
<i>Pacific</i> (A†)	1853	113 68/95	E.W. Beckwith, Racine, WI	John W. Sargent	45hp (Gates & Co., Buffalo, NY)	93'7" x 18' x 7'3"	Converted to schooner, 1854; abandoned, 1855	5; 7 (167)
<i>Peerless</i> (C*)	1853	478	Niagara Harbour & Dock Co.; James & Neil Currie (carpenter), Niagara, ON	Andrew Heron, Thomas Dick	Two 57" x 70", 200hp direct-acting trunk engines, low pressure (Tulloch & Denny, Dunbarton, Scotland)	175'6" x 26' x 10'6"	Collided w/ <i>Star of the South</i> , Nov. 5, 1861 (off Cape Hatteras)	5
<i>Pilot</i> (A†)	1853	77.4	George Hardison, Buffalo, NY	John Chapman		72' x 17'3" x 7'	Burned, Nov. 24, 1865 (Algonac, MI)	5; 6; 7 (173)
<i>Portsmouth</i> (A†)	1853	525 57/95 [674]	Bidwell & Banta; Jacob W. Banta (carpenter), Buffalo, NY	Amasa T. Kingman, John G. Camp, Jr., et al	27" x 42" vertical direct-acting, high pressure (Shepard Iron Works, Buffalo, NY)	176'4" x 29' x 10'10"	Grounded, Nov. 15, 1867 (near Thunder Bay, MI)	3 (V:223); 5; 6; 7 (176)
<i>Queen of the Lakes</i> (A†)	1853	563 53/95 [637]	George W. Jones, Black River, OH	American Transportation Co.; Niles & Wheeler		185'10" x 26'11" x 12'2"	Burned, Jun. 12, 1869 (Marquette, MI)	5; 6; 7 (179)

Vessel Name	Year Built	Tons	Builder	Owners	Engine Type	Dimensions	Remarks	Source
<i>Queen of the West</i> (A*)	1853	1851 30/95	Bidwell & Banta; Vincent Bidwell (carpenter), Buffalo, NY	Marshall O. Roberts	80" x 144" vertical walking beam (Phoenix Foundry, Henry R. Dunham & Co., New York, NY)	324'4" x 40'2" x 14'7"	Abandoned, 1858; dismantled, 1862 or 1863	2; 3 (II:213); 5; 7 (179)
<i>Ranger</i> (C*)	1853	160 [260; 144]	Augustin Cantin, Montreal, QC	Henry & Sydney Jones		137' x 24'	Wrecked, Aug. 8, 1866 (off Port Stanely, ON)	5; 6
<i>Robins, N.</i> (A†)	1853	93	Thomas Dobbie, Oswego, NY	T. Dobbie, W.H. Manwarring	20" x 30", 106hp, 75rpm oscillating (Shepard Iron Works, Buffalo, NY)	84'6" x 17' x 7'	Abandoned, 1860	5; 7 (151)
<i>Saguenay</i> (C*)	1853	381	D. & J. McCarthy & Co., Sorel, QC	Quebec & Trois Pistoles Navigation Co.; David Torrance	Vertical walking beam	155'3" x 23'8" x 9'2"	Retired, 1862	5
<i>St. Lawrence</i> (A*)	1853	1844.41	Francis N. Jones, Buffalo, NY	Samuel Henshaw, Harrison Fay [Morris Hazard, et al]	81" x 144" vertical walking beam (Allaire Iron Works, New York, NY)	326'10" x 40'11" x 14'2"	Laid up, 1857; dismantled, 1863	2; 3 (III:303); 5; 7 (191)
<i>St. Lawrence</i> (C*)	1853		Sorel, QC					5
<i>St. Nicholas</i> (A†)	1853	372 23/95	J. Andrews, Cape Vincent, NY	Bancroft & Co.	24" x 36", high pressure (A.C. Powell, Syracuse, NY)	133'9" x 25'11" x 11'6" [129' x 24' x 11']	Grounded, Nov. 23, 1857 (Sleeping Bar Bay, MI)	5; 6; 7 (192)
<i>Tinto, Dick</i> (A†, aka <i>Samuel Ives</i> ; <i>Tom Wrong</i>)	1853	204 93/95	William & George W. Jones, Black River, OH	William & George W. Jones, J.M. Underwood		114'6.75" x 23'2" x 8'6.25"	Converted to bark, 1861; abandoned, 1881	5; 7 (55)
<i>Traffic</i> (A*)	1853	50 [43]	O.V. Kelfferich, St. Clair, MI			75' x 25'9" x 5'	Burned, Oct. 18, 1869 (Saginaw River)	5; 7 (214)
<i>Underwriter</i> (A†, aka <i>J.W. Verner</i>)	1853	107.46	Mad, or Savaydor, or Laveya, Buffalo, NY	B.F. Bruce, Levi Colborne		87' x 17'4" x 7'6"	Sold foreign, 1859; broken up, Mar. 10, 1880	5; 7 (217)
<i>Webster, Daniel</i> (A*, aka <i>Sanuenay</i>)	1853	766; 1077	S. Sneider, Green Point, NY		52" x 132" (J. Elwell & Co., NY)	218'6" x 28'1" x 19'4"	Rebuilt, 1872; burned, Sep. 24, 1884 (St. Lawrence River)	5; 7 (51)

<i>Vessel Name</i>	<i>Year Built</i>	<i>Tons</i>	<i>Builder</i>	<i>Owners</i>	<i>Engine Type</i>	<i>Dimensions</i>	<i>Remarks</i>	<i>Source</i>
<i>Welland (C*)</i>	1853	300 [137]	Bath, ON [St. Catherines, ON]	Port Dalhousie & Thorold Rainroad Co.		140' x 25' [145' x 25']	Burned, Aug. 15, 1856 (Port Dalhousie, ON)	5; 6
<i>Westmoreland (A†)</i>	1853	665 84/95	Lafrinier & Stevenson, Ohio City (Cleveland), OH	Anson D. Ellis, John Ball	28" x 42", 200hp direct- acting, high pressure (Cuyahoga Steam Furnance Co., Cleveland, OH)	200'2.75" x 28'2.75" x 12'2.75"	Foundered, Dec. 7, 1854 (off Sleeping Bear Point, Lake Michigan)	3 (V:297); 5; 6; 7 (228)
<i>Whitney, T. (A*)</i>	1853	238.64	Martin Smith, Saginaw, MI	Thomas Whitney, et al		127'6" x 23'5" x 8'5"	Converted to barge, 1864 or 1865	2; 5; 7 (208)
<i>Alexandra (C*, aka Alexandria)</i>	1854		Augustin Cantin, Montreal, QC				Rebuilt/renamed, 1866	5
<i>America (C*, aka Coatzacoalcos)</i>	1854	453 [2030; 1683; 1561; 1100]	Louis Shickluna, Niagara, ON	Great Western Railway Co.	70" x 144" vertical walking beam (West Point Foundry Co., New York, NY)	279' x 36' x 13'6" [285'6" x 38'4" x 14']	Burned, Apr. 11, 1869 (San Juan del Sul, Nicaragua)	3 (I:19); 5; 7 (40)
<i>Atlas (C*)</i>	1854	215	Augustin Cantin, Montreal, QC	Montmarquet & Co.				5
<i>Banshee (C*)</i>	1854	402 [240]	George N. Ault, Portsmouth, ON	William Bowen	40" x 132" vertical walking beam (Ward's Eagle Foundry, Montreal, QC)	175' x 25' x 9'1"	Broken up, 1876	3 (III:27); 5
<i>Beaver (C*)</i>	1854	411	Augustin Cantin, Montreal, QC					5
<i>Bruce Mines (C*)</i>	1854		Tate, Montreal, QC	Montreal Mining Co. (aka Bruce Mining Co.)		126' L.	Foundered, Nov. 28, 1854 (near Tobermory, ON)	5; 6
<i>Canada (C*, aka Mississippi)</i>	1854	453 [1862]	Louis Shickluna [Edwards], Niagara, ON	Great Western Railway Co.; Sir Hugh Allen, et al	70" x 144", 1000hp vertical walking beam (West Point Foundry, Cold Spring, NY)	279' x 36' x 13'6" [285'6" x 38'4" x 14']	Renamed, 1859; foundered, Aug. 30, 1862 (Atlantic Ocean)	3 (I:69); 5

Vessel Name	Year Built	Tons	Builder	Owners	Engine Type	Dimensions	Remarks	Source
<i>Chapin, O.N.</i> (A†)	1854	47.38	Albany, NY	Chapin		64' x 14' x 6'	Stranded, Oct. 31, 1856 (Point Stanley, ON)	5; 6; 7 (160)
<i>Chase, S.G.</i> (A†)	1854	32 [27]	William Burley, Philadelphia, PA [Kensington, PA]				Abandoned, 1872; dismantled, 1874 (Little Sturgeon, WI)	5; 7 (189)
<i>Coaster</i> (A†)	1854	70 88/95	A. Miller, Oswego, NY	John Sweet, et al		96' x 17'6" x 4'6"	Grounded, Nov. 24, 1860 (off Picton, ON); abandoned, 1861	5; 6; 7 (40)
<i>Colonist</i> (C†)	1854	341 [207]	Robert Steed, Sarnia, ON	James Potter		134' x 24' x 11'	Foundered, Nov. 21, 1869 (off Straits of Mackinac)	5; 6
<i>Comet</i> (C*)	1854		F.E. Verreault, Quebec, QC	I. Gargnon		80' x 16' x 7'	Broken up, 1867	5
<i>Cushing, W.F.</i> (A†)	1854	89 17/95	Vaughn & Fisher, Philadelphia, PA			80' x 19' x 6'	Stranded, 1857 (Chicago, IL)	5
<i>Elliott, R.R.</i> (A*)	1854	321	Zadoc Pangborn; James Bushnell (carpenter), Newport (Marine City), MI	M.B. Kean	Two 40" x 87" vertical walking beam engines, low pressure (S. Battell & Co., Buffalo, NY- from Michigan, 1833)	162'9" x 27'6" x 7'10"	Converted to barge, Jun. 30, 1866; foundered, Sep. 19, 1872 (off Port Burwell, ON)	2; 5; 7 (180)
<i>Europa</i> (C*)	1854	341	E. Harrison & Co., Hamilton, ON	H. Benner, M.W. Browne, T.N. Best	Vertical walking beam	223'6" x 27'5" x 13'	Dismantled, 1863 and 1873	3 (III:135); 5
<i>Forester</i> (A*, aka Col. Forester, Forrester)	1854	503 79/95 [504]	James Bushnell, Newport, MI	Eber B. Ward	46" x 120" vertical walking beam (Macklem Iron Works, Chippewa, ON- from London, 1845)	196'7" x 28' x 9'6"	Converted to barge, Apr. 29, 1867; wrecked, Sep. 18, 1872 (off Port Burwell, ON)	2; 5; 7 (75)
<i>Foss, Robert H.</i> (A†, aka Somerset)	1854	259 49/95	Martin & Quayle, Ohio City (Cleveland), OH	Alexander Marsh, Eber J. Chapin, Robert H. Foss		120' x 20' 2.375" x 8' 7.25"	Rebuilt/renamed, 1898; dismantled, 1907	5; 7 (186)

Vessel Name	Year Built	Tons	Builder	Owners	Engine Type	Dimensions	Remarks	Source
<i>Georgian</i> (C*)	1854							5
<i>Goddard, C.W.</i> (A†, aka <i>Belle</i>)	1854	53 79/95	Clifton Park, NY		20" x 20", low pressure (Philadelphia, PA)	73'9" x 14'3" x 5'6"	Sold foreign, 1857; renamed, 1860; broken up, 1869	5; 7 (27)
<i>Himalaya</i> (C†)	1854	29	Alan Coutts, Chatham, ON	William Allen				5
<i>Huron</i> (C*)	1854	388	McCarty & Co., Sorel, QC	Halcomb & Henderson		173' x 26' x 10'	Burned, Jun. 1871 (Beauharnois Canal)	5
<i>Knapp, William H.</i> (A*)	1854	55 60/95	Oshkosh, WI				Abandoned, 1864	5
<i>Lily</i> (A†)	1854	34	Philadelphia, PA				Abandoned, 1870	5; 7 (128)
<i>Little Eva</i> (A†)	1854	20 40/95	George Hardison, Buffalo, NY	Richard Moore		40' x 11'1" x 5'3"	Abandoned, 1856	5; 7 (129)
<i>Maid of the Mist</i> (A*)	1854	100	Bidwell & Banta, Bellevue, NY				Broken up, 1874	5
<i>Menasha</i> (A*)	1854	206	Sault Ste. Marie, MI				Abandoned, 1856	5; 7 (143)
<i>Mercury</i> (C*)	1854	34	Robert Robinson, Portsmouth, ON	McPherson, Crane, & Co.		85'8" x 15'7" x 5'7"		5
<i>Mohawk Chief</i> (A†)	1854	85	Newburgh, NY				Abandoned, 1906	5; 7 (147)
<i>Moira</i> (C†)	1854	233 [280]	Al Hoselton, Belleville, ON			120' x 25' x 8'	Foundered, Oct. 9, 1862 (off Main Duck Island)	5; 6
<i>Morrison, Joseph C.</i> (C*)	1854	150	H. Chisholm, Belle Ewart, ON	Ontario Simcoe & Huron Railway Co.		150' x 24'	Burned, Aug. 4, 1857 (Barrie, ON)	5

Vessel Name	Year Built	Tons	Builder	Owners	Engine Type	Dimensions	Remarks	Source
<i>Morton, Hamilton</i> (A†, aka <i>W.K. Muir, W.R. Muir</i>)	1854	144 55/95	George Collyer; Samuel L. Collyer (carpenter), Buffalo, NY	William J. Farrell	(Franklin Iron Works, Albany, NY)	91'9" x 19' x 9'	Burned, Nov. 1858 (Detroit, MI); rebuilt/renamed, 1854; boiler explosion, Sep. 18, 1867 (Black River, OH)	5; 6; 7 (91)
<i>Mount Vernon</i> (A†)	1854	577 77/95	Frederick D. Ketchum, Joseph M. Keating, Huron, OH	Western Transportation Co.		178' x 29'4" x 11'8"	Boiler explosion, Sep 10, 1860 (Point Pelee, Lake Erie)	5; 6; 7 (150)
<i>Mulford, J.E.</i> (A†, aka <i>USS Daisy, Little Queen; USS Mulford</i>)	1854	54	F. Burley, Oswego, NY				Renamed several times; abandoned, 1871	5; 7 (105)
<i>Nickle, Willie</i> (C†)	1854	150	Portsmouth, ON	Monton				5
<i>North Star</i> (A*)	1854	1106 73/95	Alvin A. & Samuel W. Turner, Cleveland, OH	Samuel W. Turner, et al [Simon Mendelbaum, et al]	Vertical walking beam (Cuyahoga Steam Furnace Co., Cleveland, OH)	260' x 33'6" x 13'1" [274' x 33'6" x 13'1"]	Burned, Feb. 20, 1862 (Cleveland, OH)	2; 3 (III:259); 5; 6; 7 (159)
<i>Ogemah</i> (*)	1854							5
<i>Olive Branch</i> (A†)	1854	145	Ferry & Sons, Ottawa Point (Ferrysburg), MI	Alexander Carey, et al	Two 16" cyl.engines	146' x 28'	Abandoned, 1858	5; 7 (163)
<i>Oriental</i> (A†)	1854	950 25/95 [750]	Bidwell & Banta, Buffalo, NY	Wells D. Walbridge	36" x 56", 42rpm non-condensing (Shepard Iron Works, Buffalo, NY)	222'11" x 34'1" x 13'1"	Grounded, Oct. 14, 1859 (Beaver Island, MI)	5; 6; 7 (164)
<i>Oshawa</i> (C†)	1854	329 [340]	Augustin Cantin, Montreal, QC [Laprairie, QC}	Henry & Sydney Jones		128' x 23'	Grounded, Sep. 29, 1861 (off Kingston, ON)	5; 6
<i>Ottawa</i> (A†)	1854	315.35	Stephens & Presley, Cleveland, OH			142'6" x 27'5" x 8'8"	Converted to barge, Apr. 27, 1870; foundered, Nov. 29, 1872	5; 7 (166)

Vessel Name	Year Built	Tons	Builder	Owners	Engine Type	Dimensions	Remarks	Source
<i>Pasha, Omar</i> (A†)	1854	343 81/95	Bidwell & Banta; Vincent Bidwell (carpenter), Buffalo, NY	J.L. Hurd & Co., et al		138'7" x 26'4" x 10"	Burned, Oct. 8, 1869 (Muskegon, MI)	5; 6; 7 (163)
<i>Peck, William</i> (A†)	1854	172 75/95	George Stewart, Buffalo, NY	Elias & Thomas Sims		90' x 20'10" x 10'2"	Sold foreign, 1862; wrecked, 1868 (Kincardine, ON)	5; 7 (232)
<i>Plymouth</i> (A†)	1854	846 40/95	Stepenson & Lafrinier; Ira Lafrinier, Ohio City (Cleveland), OH	Pearl L. Sternberg & Co.	40" x 36", high pressure (Shepard Iron Works, Buffalo, NY)	212'6.75" x 32'4" x 12'10.5"	Converted to schooner, Jul. 7, 1885; sank, Nov. 11, 1913 (Gull Island, MI)	5; 7 (175)
<i>Plymouth Rock</i> (A*)	1854	1991 13/95 [2202]	John Englis, Buffalo, NY	Michigan Central Raid Road Co. [New York Central Railroad Co.]	81" x 144", 1500hp vertical walking beam (Allaire Iron Works, New York, NY)	335'10" x 42' x 14'6"	Laid up, 1857; engine removed, 1863	2; 3 (II:203); 5; 7 (175)
<i>Pontiac</i> (C*)	1854	305	Merrill, Pembroke, ON	Union Forwarding Co.				5
<i>Read, Robert</i> (A†)	1854	33 37/95	Philadelphia, PA			55' x 13'6" x 5'	Abandoned, 1860	5; 7 (187)
<i>Reed, Robert</i> (A†, aka <i>Ellen Jeffers</i>)	1854	54	Raney & Co., Philadelphia, PA	Peter P. Wright	70hp		Rebuilt several times	5
<i>Shanley, Walter</i> (C*, aka <i>Clyde</i>)	1854	410	Augustin Cantin, Montreal, QC				Renamed, 1863	5
<i>Smith, Peter</i> (A*)	1854	32	F. Burley, Philadelphia, PA			52' x 15' x 5'3"	Rebuilt several times; boiler explosion, Apr. 6, 1884 (Vermilion, OH)	5; 7 (171)
<i>St. Clair</i> (C*)	1854	286 [272]	Augustin Cantin, Montreal, QC			156' x 26'3" x 10'3"	Foundered, Oct. 1, 1888 (off Point Sanilac, Lake Huron)	5

<i>Vessel Name</i>	<i>Year Built</i>	<i>Tons</i>	<i>Builder</i>	<i>Owners</i>	<i>Engine Type</i>	<i>Dimensions</i>	<i>Remarks</i>	<i>Source</i>
<i>Sun (A†)</i>	1854	629 [680]	Bidwell & Banta; Vincent Bidwell (carpenter), Buffalo, NY	Ansel R. Cobb, et al	28.5" x 42" vertical direct-acting, high pressure (Shepard Iron Works, Buffalo, NY)	191'11" x 28'6" x 12'	Foundered, Jul. 12, 1874 (Pointe Aux Pins, ON)	3 (VI:295); 5; 6; 7 (205)
<i>Swift, Asa R. (A†)</i>	1854		Cran & Knapp, Rochester, NY	Capt. E. Hathaway, James Bell	(Rochester, NY)		Boiler exploded, Sep. 29, 1854 (Buffalo, NY)	5
<i>Tadousac (C*)</i>	1854	148 [46]	Quebec, QC			119' x 19'1" x 9'5"		5
<i>Tempest (A†)</i>	1854	86	Philadelphia, PA		50hp		Abandoned, 1877 (Spring Lake, MI)	5; 7 (210)
<i>Toledo (A†)</i>	1854	585.22	Benjamin B. Jones, Buffalo, NY	Charles H. Lee, et al	Direct-acting, high pressure	178'7" x 29'2" x 11'10"	Grounded, Oct. 22, 1856 (off Port Washington, WI)	3 (IV:321); 5; 6; 7 (213)
<i>Trenton (C*)</i>	1854	240 [166]	Augustin Cantin, Montreal, QC	Bay of Quinte & St. Lawrence Line		134' x 23' x 8'	Burned, Mar. 4, 1858 (Picton, ON)	5; 6
<i>Vail, George O. (A†)</i>	1854	52.25	Brainard, Albany, NY				Abandoned, 1867	5; 7 (84)
<i>Ward, Aaron B. (A†)</i>	1854	40 [37]	Theodore Burley, Philadelphia, PA				Foundered, Apr. 29, 1870 (off Grand Haven, MI)	5; 7 (2)
<i>Western World (A*)</i>	1854	2002 42/95 [2202; 2000]	Englis & Newton; John Englis (carpenter), Buffalo, NY	Michigan Central Rail Road Co. [New York Central Railroad Co.]	81" x 144", 1500hp vertical walking beam (Allaire Iron Works, New York, NY)	337' x 42'.083" x 14'.5" [337' x 45' x 14'6"]	Laid up, 1857; engine removed, 1863	2; 3 (II:279); 5; 7 (228)
<i>Winslow, R.G. (A†)</i>	1854	341	Cleveland, OH					5
<i>York (C*)</i>	1854		Montreal, QC		90hp		Burned, 1874 (Quebec)	5
<i>Zimmerman (C*)</i>	1854	477 [475]	Louis Shickluna, Niagara, ON	Oliver T. Macklem	40.5" x 144" vertical walking beam (Macklem Iron Works, Chippewa, ON)	200'3" x 28'9" x 9' [200'3" x 28' x 9']	Burned, Aug. 21, 1863 (Niagara-on- the-Lake, ON)	3 (III:353); 5; 6

Vessel Name	Year Built	Tons	Builder	Owners	Engine Type	Dimensions	Remarks	Source
<i>Adelaide</i> (A*, aka <i>Croton</i>)	1855	47 45/95	William D. Hill, Allegan, MI			80' x 16' x 4'		5; 7 (48)
<i>Ajax</i> (A*)	1855	70	Tanktown (Green Bay), WI	Morgan L. Martin, et al			Abandoned, 1860	5; 7 (4)
<i>Bell, Mary</i> (A†)	1855	127 64/95	VanSlyke & Notter; George H. Notter (carpenter), Buffalo, NY	Robert Howlett		86' x 18'4" x 8'7"	Abandoned, 1867 (Marine City, MI)	5; 7 (138)
<i>Bloore, J.H.</i> (A†)	1855	50	Thomas Dobbie; Richard Rogers (carpenter), Buffalo, NY	Dobbie & Manwaring	12" x 16", 110hp (Shepard Iron Works, Buffalo, NY)	54' x 11' x 7'	Abandoned, 1864	5
<i>Blue Bonnet</i> (C*)	1855	278	Sorel, QC			156'9" x 24' x 7'5"	Retired, 1868	5
<i>Bradbury, T.U</i> (A†, aka <i>Florence M. Dickinson</i>)	1855	545 94/95	Luther Moses, Cleveland, OH	Robert Montgomery	Oscillating (Newburg Engine Works)	178.56' x 24.47' x 11.47'	Grounded, Nov. 17, 1886 (near Kewaunee, WI)	5; 7 (208)
<i>Canadian</i> (C*)	1855	77	Levis, QC			88' x 19'	Broken up, 1866	5
<i>Carson, James</i> (A*)	1855	28.03	Johnson & Tisdale, Cleveland, OH [Howard, WI]	John H. Garrett		81.2' x 14' x 2.62'	Wrecked, Sep. 1857	5; 7 (108)
<i>Chicago</i> (A†, aka <i>Chicago No. 1</i>)	1855	758 43/95 [764]	Bidwell & Banta, Buffalo, NY	American Transportation Co.	38" x 42" oscillating, low pressure (Shepard Iron Works, Buffalo, NY)	197'10" x 31'3" x 12'11"	Burned, Aug. 25, 1882 (Fox Island, Lake Michigan)	5; 6; 7 (35)
<i>Croton</i> (A*)	1855	47 45/95	William D. Hill, Allegan, MI	S.G. Hutchins		80' x 16' x 4'	Abandoned, 1860	5; 7 (48)
<i>Decatur</i> (A†)	1855	49.25 [45]	Philadelphia, PA			63'4" x 14'9" x 5'3"	Abandoned, 1860	5; 7 (52)
<i>Dime</i> (A†)	1855	47 60/95	Bidwell & Banta; Jacob W. Banta (carpenter), Buffalo, NY	John Z. Quackenbush		60' x 14'6" x 6'1"	Abandoned, 1864	5; 7 (55)
<i>Dorr, E.P.</i> (A†)	1855	300	VanSlyke & Notter, Buffalo, NY	Chicago, Mutual, Garden City & Star Insurance Co.		161' x 25'	Collided w/ propeller <i>Oliver Cromwell</i> , Jun. 24, 1856 (Saginaw Bay, MI)	5; 6; 7 (58)

Vessel Name	Year Built	Tons	Builder	Owners	Engine Type	Dimensions	Remarks	Source
<i>Eagle</i> (A†)	1855	58 90/95	VanSlyke & Notter, Buffalo, NY			59' x 15' x 6'8"	Abandoned, 1865	5; 7 (59)
<i>Eureka</i> (A*)	1855	51 74/95	Eureka, WI			100' x 14' x 3'10"	Abandoned, 1862	5; 7 (67)
<i>Forest Queen</i> (A*)	1855	462 65/95	James Bushnell, Newport, MI	Samuel & Eber B. Ward	Vertical walking beam (from <i>Pacific</i> , 1848)	200' x 28' x 9'6"	Converted to barge, Jul. 27, 1866; foundered, Nov. 8, 1872 (Long Point, Lake Erie)	2; 5; 7 (74)
<i>Grant, Gurdon</i> (A†, aka <i>Grant Gordon</i>)	1855	45 [41]	F. Burley, Philadelphia, PA	Alfred Mosher			Burned, Jun. 5, 1862 (Fort Pillow, TN)	5; 7 (90)
<i>Island Queen</i> (A*)	1855	168 49/95 [173]	Daniel Dibble, Kelley's Island, OH	Datus Kelley, et al	Crosshead (H.G. Olds & Co., Sandusky, OH)	122' x 16' x 7'1" [122'6" x 20'6" x 7'1"]	Converted to barge, Jun. 11, 1875; wrecked, Nov. 3, 1876 (Grand Haven, MI)	2; 3 (III:189); 5; 7 (104)
<i>Jersey City</i> (A†)	1855	633	George W. Jones, Black River, OH	New York & Erie Railroad Co.; Stephen D. Caldwell (manager)	Two 24 "x 36" engines, high pressure (Cuyahoga Steam Furnance Co., Cleveland, OH)	182' x 29'6" x 12'6" [152' x 29' x 12']	Wrecked, Nov. 23, 1860 (opposite Dunkirk, NY)	5; 6; 7 (111)
<i>Kingston</i> (C*, aka <i>Bavarian</i> ; <i>Algerian</i> ; <i>Cornwall</i>)	1855	433 [427; 345]	Bartley & Dunbar [Gilbert & Co.], Montreal, QC	John Hamilton	45" x 120" vertical walking beam	174' x 26'2" x 9'	Burned , Jun. 11, 1872 (Grenadier Island); rebuilt/renamed several times; scuttled, 1928	3 (III:207); 5; 6
<i>Lion</i> (A†)	1855	150 14/95	John L. Wolverton, Detroit, MI	Robert Lee, et al	24" x 38" (Detroit Locomotive Works, Detroit, MI)	102' x 22'2" x 7'3"	Abandoned, 1863	5; 7 (128)
<i>Lord Seaforth</i> (C*)	1855	259	George T. Davey, Levis, QC			133' x 27' x 10'		5
<i>Mink</i> (C†)	1855	26.64	George Chaffey & Bros., Bedford Mills, ON	George Chaffey & Bros.		44'7" x 8'7" x 7'7"		5

Vessel Name	Year Built	Tons	Builder	Owners	Engine Type	Dimensions	Remarks	Source
<i>Montreal</i> (C*)	1855	114	McCarty & Co., Sorel, QC			114' x 22' x 8'	Dismantled, 1875	5
<i>Nicolet</i> (C†, aka <i>L.L. Tucker</i> , <i>Ann Hartley</i>)	1855	157; 195	P. Calio, Nicolet, Trois Rivers, QC			100' x 22' x 9'	Rebuilt/renamed, 1859; converted to schooner, 1865; grounded, Oct. 11, 1866 (Rabbit Island, Georgeon Bay)	5
<i>Norbeck</i> (A*)	1855	51	Grand Rapids, MI				Abandoned, 1859	5; 7 (158)
<i>Old Concord</i> (A†)	1855	457 18/95	John E. & William E. Dixon, Newport, MI	J.L. Hurd & Co.	27" x 40" (Detroit Locomotive Works, Detroit, MI)	167'9" x 27'4" x 10'6"	Converted to schooner, Apr. 20, 1876; foundered, 1888	5; 7 (162)
<i>Peggie</i> (A†)	1855	39.27	George Ruddiman, Muskegon, MI	George Ruddiman		75' x 16'4" x 3'6"	Abandoned, 1867	5; 7 (169)
<i>Planet</i> (A*)	1855	1153.89 [1154]	James Bushnell, Newport, MI	Eber B. Ward	60" x 120" vertical walking beam (Macklem Iron Works, Chippewa, ON)	257'1" x 32'1" x 12'1"	Converted to barge, Oct. 5, 1867; foundered, Nov. 7, 1872 (Two Rivers, WI)	2; 3 (IV:251); 5; 7 (174)
<i>Potomac</i> (A†)	1855	818 40/95	Luther Moses, Cleveland, OH	Charles Ensign, Rufus C. Palmer, William Foot	Two 25" x 36" engines (Buffalo Engineering Works, NY)	209.14' x 33.04' x 12.43'	Converted to barge, Jun. 26, 1885; abandoned, 1895 (Buckhorn Island, NY)	5; 7 (177)
<i>Raftsmen</i> (C*, aka <i>Gazelle</i> , <i>Gatineau</i>)	1855	94	J. Resley (Risley?), Quebec, QC			101' x 23' x 7'	Retired, 1884; burned, 1887	5
<i>Relief</i> (A†)	1855	362 90/95	Van Slyke & Notter, Buffalo, NY	Mutual Insurance Co.	30" x 36" oscillating	128'2" x 25'4" x 12'1"	Burned, Jul. 18, 1884 (near Starve Island, Lake Erie); abandoned, 1885	5; 6; 7 (183)

Vessel Name	Year Built	Tons	Builder	Owners	Engine Type	Dimensions	Remarks	Source
<i>Rescue</i> (A†)	1855	285 29/95	Bidwell & Banta, Buffalo, NY	Henry & Isaac Walker, B.S. Shepard	Two engines (Shepard Iron Works, Buffalo, NY)	123'5" x 28' x 10'	Sold foreign, 1858; possibly dismantled, 1877	5; 7 (184)
<i>Rhodes, D.P.</i> (A†, aka <i>Dan Rhodes</i>)	1855	85	C. Harmon, Cleveland, OH		Two 10" x 20" or 17" x 22" engines, high pressure		Converted to schooner, 1867; grounded, Nov. 4, 1867 (Toledo, OH)	5; 7 (49)
<i>Rose</i> (C*)	1855	103	Augustin Cantin, Montreal, QC					5
<i>Sebastopol</i> (A*)	1855	863.13	Luther Moses, Cleveland, OH	Luther Moses, Henry Chisholm, Alexander Morrison	32" x 11", 800hp (Cuyahoga Steam Furnance Co., Cleveland, OH- from <i>Saratoga</i> , 1846)	234.1' x 30.71' x 12.38' [230' x 26' x 14']	Wrecked, Sep. 18, 1855 (St. Francis, WI)	5; 6; 7 (197)
<i>Stewart, Mary</i> (A†)	1855	442 40/95	John E. Dixon, Newport, MI	J.L. Hurd & Co.		170'11" x 21'2" x 10' [171' x 27' x 10']	Wrecked, Nov. 11, 1866 (near Pentwater, MI)	5; 6; 7 (140)
<i>Storm</i> (A†)	1855	59	Raney & Neafie, Philadelphia, PA		43hp		Wrecked, Aug. 24, 1874	5
<i>Swift, Asa R.</i> (A*)	1855	15 47/95	Daniel G. Cunningham, Detroit, MI	Daniel G. Cunningham		43' x 10'6" x 3'9"	Abandoned, 1860	5; 7 (14)
<i>Talcott, George</i> (A*)	1855	65	Phoenix, NY	Hollison & Hastings	30hp (Talcott & Canfield)		Abandoned, 1857	5; 7 (84)
<i>Tinto</i> (C†)	1855	400	D. & J. McCarthy, Sorel, QC	Gibb & Ross	22.5" x 30", 180hp (Miln & Miln, Dock Engine Works, Montreal, QC)	135' x 23' [135' x 25']	Burned, Jul. 17, 1856 (off Snake Island, Lake Ontario)	5; 6
<i>Undine</i> (A*)	1855	116	Cottreville, MI				Abandoned, 1860	5; 7 (217)
<i>Union</i> (A*)	1855	116 28/95	Joseph P. Arnold, Port Huron, MI	E.T. Brockway, James Moffatt		92' x 18'.416" x 7'6"	Burned, Dec. 30, 1865 (Detroit, MI)	5; 6; 7 (218)
<i>Voyageur</i> (C*)	1855	111	Quebec, QC					5
<i>Warner, Hiram</i> (A†)	1855	65 28/95	Gordon P. Ozier, Chicago, IL	Ozier, Walker, & Co.		64'11" x 16'5" x 5'10"	Abandoned, 1880	5; 7 (96)

Vessel Name	Year Built	Tons	Builder	Owners	Engine Type	Dimensions	Remarks	Source
<i>Welland</i> (C‡)	1855	318	D. McCarty & Co., Sorel, QC				Retired, 1871	5
<i>Whitehall</i> (C*)	1855	190	D. McCarty & Co., Sorel, QC	Whitehall & Co.		105' x 22'	Broken up, 1871	5
<i>Acme</i> (A†)	1856	762 54/95	George Hardison, Buffalo, NY	Charles Hitchcock	40" x 40", low pressure (Shepard Iron Works, Buffalo, NY)	190'10" x 33'3" x 12'9"	Founded in storm, Nov. 4, 1867 (off Dunkirk, NY)	5; 6; 7 (2)
<i>Adriatic</i> (A*)	1856	663 78/95	VanSlyke, Notter & Co.; Charles VanSlyke (carpenter), Buffalo, NY	Charles Bancroft	40" x 36", low pressure	178' x 31'6" x 12'7"	Foundered, Oct. 1, 1872 (near Long Point, ON)	5; 7 (3)
<i>Alida</i> (A*)	1856	35.17 [58]	Kirby & Hoyt; Martin Smith (carpenter), East Saginaw, MI	Little & Copeland		81' x 15' x 3'	Boiler explosion, Dec. 20, 1867 (Saginaw, MI)	5; 6; 7 (7)
<i>Alleghany</i> (A†)	1856	601 10/95	James M. Jones, Milwaukee, WI	American Transportation Co.	24" x 42" (Cuyahoga Steam Furnance Co., Cleveland, OH- from <i>Allegheny</i> , 1849)	172'1" x 28'7" x 12'1" [167' x 29' x 12']	Grounded, Oct. 29, 1896 (Summer Island); burned, Jul. 19, 1897	5; 6; 7 (7)
<i>Amity</i> (C*)	1856	210 [217; 176]	Allen Coutts, Chatham, ON	McCallan & Co.	16" x 30", high pressure	106' x 24' x 9' [102' x 26' x 7']	Pollywog steamer; wrecked, Oct. 9, 1864 (near Long Point, Lake Erie)	2; 5; 6
<i>Araxes</i> (A†)	1856	593 5/95	Francis N. Jones, Buffalo, NY	Buffalo & Toledo Transportation Co.		179'4" x 30'2" x 11'7" [182' x 30' x 10']	Grounded, Sep. 1890 (near Bay City, Saginaw River); foundered, 1894 (Bay City, MI)	5; 6; 7 (12)
<i>Armstrong, C.W.</i> (A†)	1856	52 [33; 31]	A.H. Walker, Albany, NY			57' x 14' x 7'4"	Burned, Nov. 21, 1870 (Bay City, MI)	5; 6; 7 (27)
<i>Barber, Joe</i> (A†, aka <i>J. Barber</i>)	1856	263 81/95 [306]	Luther Moses, Cleveland, OH	Estate of J. Barber; S. Lind (executor)		125.84' x 26.04' x 8.62'	Burned, Jul. 19, 1871 (off Michigan City, IN)	5; 6; 7 (104)
<i>Berlin City</i> (A*)	1856	74	Phelps, Ruddock & Co., Berlin, WI			100' L.	Stranded, Jul. 8, 1861 (Oshkosh, WI)	5; 6; 7 (21)

Vessel Name	Year Built	Tons	Builder	Owners	Engine Type	Dimensions	Remarks	Source
<i>Buckeye</i> (A†)	1856	366 [378; 352]	Qualye & Martin, Cleveland, OH	Northern Transit Co.	24" x 36" oscillating	136'2" x 26' x 11'2"	Burned, Jun. 11, 1885 (Manitoulin Island, Georgian Bay)	5; 6; 7 (26)
<i>Cuyahoga</i> (A†)	1856	601 77/95	Moses & Quayle; Norris (carpenter), Cleveland, OH	Luther Moses, George W. Holt, Charles Ensign		187'4.2" x 27'9.6" x 12'.6"	Converted to barge, Sep. 12, 1879; abandoned, 1887	5; 7 (49)
<i>Davis, Jefferson</i> (A*, aka <i>Drummond Grace</i> ; <i>Baltic</i> ; <i>Search</i>)	1856	230 [250]	Neafie & Raney, Philadelphia, PA	U.S. Topographical Engineers	50" x 48", 100hp vertical walking beam	143' x 21' x 8'9" [138' x 21'6" x 8'9"]	Rebuilt/renamed several times; dismantled, 1940	5
<i>Dispatch</i> (C†)	1856	55.5 [103]	Beaudry & Co., St. Antoine, QC	Charles King		108'3" x 20'5" x 8'5"	Grounded, Oct. 10, 1871 (Point Aux Barques, MI)	5; 6
<i>Druid</i> (C*, aka <i>Niagara</i>)	1856	239 [166]	David Todd, John McGregor, Glasgow, Scotland	Nova Scotia Government	44" x 52", 170hp oscillating (Todd & McGregor)	160' x 21'6" x 10'4"	Dismantled, 1922	5
<i>Elmira</i> (A†)	1856	599 15/95 [781]	Lafrinier & Stevenson, Cleveland, OH	Stephen D. Caldwell		178.33' x 30.30' x 11.73' [180' x 28' x 11']	Burned, Nov. 30, 1878 (at dock, Dunnville, ON)	5; 6; 7 (63)
<i>Euphrates</i> (A†)	1856	587 35/95	Bidwell & Banta; Joseph W. Banta, Buffalo, NY	Buffalo & Toledo Transportation Co.		178' x 30' x 11'8"	Grounded, May 23, 1862 (bar off Sandusky Harbor)	5; 6; 7 (67)
<i>Evergreen City</i> (A†)	1856	624 28/95 [554]	Peck & Masters, Cleveland, OH	J.F. Kirkland, James Ball	Low pressure	192'5" x 27'9" x 12'1"	Grounded, Nov. 15, 1871 (Long Point); abandoned, 1875	5; 6; 7 (68)
<i>Express</i> (A†)	1856	52 74/95	A. Miller, Oswego, NY			70'8" x 14'9" x 5'6"	Sold foreign, 1862	5; 7 (69)
<i>Fisk, Fannie</i> (A*, aka <i>General</i> <i>Quitman</i>)	1856	97 89/95	Fisk & Hart, Green Bay, WI [Howard, WI]	Joel S. Fisk		124' x 18'6" x 4'5"	Burned, Jul. 16, 1865 (Cairo, IL)	5; 7 (70)

Vessel Name	Year Built	Tons	Builder	Owners	Engine Type	Dimensions	Remarks	Source
<i>Foster, Andrew</i> (A†)	1856	42	Theodore Burley, Philadelphia, PA				Abandoned, 1868	5; 7 (10)
<i>Free State</i> (A†)	1856	768 27/95 [947]	Bidwell & Banta, Buffalo, NY	Western Transportation Co.		196' x 13.6' x 13' [186' x 31' x 13']	Grounded, Sep. 30, 1871 (Gray's Reef, Lake Michigan)	5; 6; 7 (77)
<i>Hercules</i> (C*, aka <i>Hercules No. 2</i>)	1856	470 [331]	Henry Roney, Garden Island, ON	Delano D. Calvin, Ira A. Breck	57" x 120"	122'2" x 25'8" x 11'5" [172' x 26' x 12']	Burned, Dec. 19, 1871 (Kingston, ON)	5; 6
<i>Howard, R.L.</i> (C†)	1856	119 [65]	D. McSwain, Dunnville, ON	D. McSwain		77' x 14' x 8'	Foundered, Oct. 24, 1867 (off Port Dalhousie, ON)	5; 6
<i>International</i> (A*)	1856	1221 84/95	Bidwell & Banta; Jacob W. Banta (carpenter), Buffalo, NY	Buffalo & Lake Huron Railway; Fayette Rumsey	Two horizontal engines, low pressure	226' x 40'8" x 13'	Burned, Feb. 2, 1874 (Fort Erie, ON)	3 (III:179); 5; 6; 7 (101)
<i>Iron City</i> (A†)	1856	606 89/95	Martin & Quayle, Cleveland, OH	Hussey & Sinclair	24" x 36", 475hp, high pressure (Cuyahoga Steam Furnance Co., Cleveland, OH)	184.17' x 29.28' x 11.82'	Converted to barge, Jul. 16, 1872; foundered, Sep. 25, 1872	5; 7 (102)
<i>Jones, Tarleton</i> (A†)	1856	57 21/95	George S. Weeks, Chicago, IL	David A. Nickles		61'4" x 16' x 6'6"	Abandoned, 1863	5; 7 (209)
<i>Kenosha</i> (A†)	1856	645 65/95	Luther Moses, Cleveland, OH	Charles Ensign, et al	28.5" x 42" oscillating (Phoenix Foundry, Cleveland, OH)	194.62' x 27.85' x 12.38'	Burned, Oct. 26, 1864 (Sarnia, ON); converted to barge, 1865	5; 6; 7 (120)
<i>Little, H.</i> (C*)	1856	25 [20]	James Steinhoff, Wallaceburg, ON	Hiram Little		59' x 10'9" x 4'4"		5
<i>Magnet</i> (A†)	1856	235 [256]	Malcolm Smith, East Saginaw, MI	C.B. Mott	Direct-acting, high pressure (Fletcher, Harrison, & Co., New York, NY)	141'8" x 24' x 7'4"	Rebuilt, 1864, 1865, 1879; foundered, Sep. 12, 1900 (off Middle Sister Island, Lake Erie)	2; 3 (III:217); 5; 7 (134)
<i>Mary Ann</i> (A†)	1856	31 [21]	Sackets Harbor, NY					5

Vessel Name	Year Built	Tons	Builder	Owners	Engine Type	Dimensions	Remarks	Source
<i>McQueen, Walter</i> (A†)	1856	128	Daniel O'Connor, Buffalo, NY			100' x 18' x 9'6"	Abandoned, 1866	5; 7 (225)
<i>Mears, Charles</i> (A†)	1856	272.24	Luther Moses, Cleveland, OH	Charles Mears & Co.		127.23' x 26.43' x 8.78'	Burned, Aug. 7, 1864 (Muskegon, MI); converted to barge, 1865	5; 6; 7 (33)
<i>Menominee</i> (A*)	1856	55	Fon du Lac, WI				Abandoned, 1865	5; 7 (143)
<i>Mineral Rock</i> (A†)	1856	555.07	VanSlyke & Notter, Buffalo, NY	Wells D. Walbridge, et al	Vertical direct-acting, high pressure [Two engines (Shepard Iron Works, Buffalo, NY- from <i>Monticello</i> , 1848)]	171'7" x 27'2" x 12'1"	Abandoned, 1896	3 (IV:203); 5; 7 (145)
<i>Mohawk</i> (A†, aka <i>J.E. Potts</i>)	1856	789	Luther Moses, Cleveland, OH	Western Transportation Co.	Vertical direct-acting, high pressure [Two 26" x 28" oscillating engines]	200' x 31'1" x 13'3" [200'5" x 31'9" x 13'3"]	Boiler explosion, Nov. 7, 1860 (St. Clair Flats); converted to barge, 1879; abandoned, 1898	3 (IV:205); 5; 6; 7 (147)
<i>Monarch</i> (C*)	1856	400	D. & G. McCarthy [A. & D. Shaw], Sorel, QC [Kingston, ON]	A. & D. Shaw, & Co.	46" x 132", 130hp	174' x 25' x 11'	Stranded, Nov. 29, 1856 (off Toronto, ON)	5; 6
<i>Montgomery</i> (A†)	1856	925 31/95 [995]	James B. Bushnell, Newport (Marine City), MI	Eber B. Ward	40" x 40", low pressure (Detroit Locomotive Works, Detroit, MI)	203'8" x 33'8" x 12'8"	Converted to barge, Sep. 25, 1879; wrecked, 1901 (off Crisp Point, Lake Superior)	5; 7 (149)
<i>Napolean</i> (C*)	1856	274	Augustin Cantin, Montreal, QC	Richelieu Navigation Co.	Vertical walking beam	167'5" x 25'2" x 8'3"	Dismantled, 1871	5
<i>Napolean III</i> (C*)	1856	494 [212]	Glasgow, Scotland	Minister of Marine, Ottawa, ON		173' x 30' x 16'6"		5

Vessel Name	Year Built	Tons	Builder	Owners	Engine Type	Dimensions	Remarks	Source
<i>Neptune</i> (A†)	1856	636 60/95 [774]	Bidwell & Banta; Vincent Bidwell (carpenter), Buffalo, NY	Western Transportation Co.; Pearl L. Sternburg (president)	Vertical direct-acting, high pressure	185' x 30' x 12' [186' x 30' x 12'; 185' x 30' x 11']	Burned, Nov. 24, 1874 (Saginaw, MI)	3 (III:241); 5; 6; 7 (154)
<i>New York</i> (A†)	1856	665 31/95 [995; 704]	Bidwell & Banta, Buffalo, NY	Stephen D. Caldwell	30" x 30" oscillating, low pressure	182'8" x 32" x 12'1"	Foundered, Oct. 14, 1876 (off Forester, MI)	5; 6; 7 (157)
<i>Niles</i> (A*)	1856	64	Berrien, MI				Abandoned, 1859	5; 7 (158)
<i>Notter, George H.</i> (A†)	1856	104 [109]	VanSlyke & Notter, Buffalo, NY			76' x 19' x 8'	Burned, Aug. 30, 1861 (off Grand Haven, MI)	5; 6; 7 (83)
<i>Olean</i> (A†)	1856	609	Lafrinier & Stevenson; John G. Huff (carpenter), Cleveland, OH	Stephen D. Caldwell		180.36' x 30.08' x 11.85'	Wrecked, May 10, 1890	5; 7 (162)
<i>Ontario</i> (A†)	1856	71.3 [36; 27]	William Cramp & Sons, Philadelphia, PA [Petty's Island, NJ]	H.M. Ames, Capt. Joseph Kimball		72'6" x 16'6" x 6'6" [77' x 16' x 8']	Burned, Nov. 17, 1883 (off Port Huron, MI); abandoned, 1884	5; 6; 7 (164)
<i>Ontonagon</i> (A†)	1856	560.55 [377]	Bidwell & Banta; Jacob W. Banta (carpenter), Buffalo, NY	Albert T. Spencer, Frederick A. Howe	Direct-acting, high pressure (Shepard Iron Works, Buffalo, NY)	175'7" x 30' x 10'2" [176'11" x 29'10" x 11'3"]	Burned, Sep. 25, 1883 (off Stag Island)	3 (IV:233); 5; 6; 7 (164)
<i>Orontes</i> (A†)	1856	588 73/95	Francis N. Jones, Buffalo, NY	Buffalo & Toledo Transportation Co.		179'4" x 30'2" x 11'6"	Converted to barge, May 12, 1877; grounded, May 22, 1883	5; 7 (165)
<i>Oshkosh City</i> (A*)	1856	173	Oshkosh, WI				Abandoned, 1858	5; 7 (165)
<i>Osmer, George</i> (A†)	1856	51	Howard, WI				Abandoned, 1860	5; 7 (84)

Vessel Name	Year Built	Tons	Builder	Owners	Engine Type	Dimensions	Remarks	Source
<i>Page, Alanson S.</i> (A†, aka <i>Hope</i>)	1856	140 [144]	George R. Rogers, Oswego, NY	Dobbie & Co.	160hp (Raney, Triffey, & Co., Philadelphia, PA)	100' x 19' x 9'	Renamed, 1865	5; 7 (5)
<i>Perry, H.O.</i> (A†, aka <i>John Brown</i>)	1856	65 [45]	Bidwell & Banta, Buffalo, NY			57' x 16'8" x 5'8"	Renamed, 1862; broken up, 1883	5; 7 (91)
<i>Pittsburgh</i> (A†, aka <i>Cyclone</i>)	1856	606.11	Luther Moses, Cleveland, OH	Holt & Ensign	28" x 36", high pressure (L. Parmalee & Co.)	186.02' x 27.57' x 12.31'	Rebuilt/renamed, 1881; wrecked, Sep. 7, 1885 (off AuGres, MI)	5; 7 (174)
<i>Pontiac</i> (A*)	1856	68	W.C. Heydon, Grand Rapids, MI			124' x 17' x 3'	Boiler explosion, May 14, 1864 (near Grand Haven, MI)	5; 6; 7 (176)
<i>Queen City</i> (A*)	1856	117 19/95 [177]	Pringle, Oshkosh, WI	William A. Knapp, John Fitzgerald		118' x 21' x 6'	Burned, Nov. 22, 1875	5; 7 (179)
<i>Queen Victoria</i> (C*)	1856							5
<i>Racine</i> (A†)	1856	715.189	Luther Moses, Cleveland, OH	Luther Moses	30" x 36" oscillating	193'5 "x 30'3" x 12'4"	Burned, Aug. 10, 1864 (off Rondeau, ON); converted to bark, 1866	5; 6; 7 (181)
<i>Salvor</i> (A†, aka <i>M.S. Perry</i>)	1856	450 [357]	VanSlyke & Notter, Buffalo, NY	Aetna Insurance Co.	30" x 36", 85hp oscillating (Shepard Iron Works, Buffalo, NY)	161' x 25'4" x 11'7" [161' x 25'5"; 183' x 26'8" x 19']	Renamed, 1861; abandoned, Sep. 3, 1877 (Philadelphia, PA)	3 (I:377; V:243); 5; 7 (193)
<i>St. Joseph</i> (A*)	1856	61	St. Joseph, MI				Abandoned, 1866	5; 7 (191)
<i>Terrebonne</i> (C*)	1856	141 [37]	Montreal, QC					5
<i>Tonawanda</i> (A†)	1856	822.68 [936]	Benjamin B. Jones, Buffalo, NY	Western Transportation Co.	36" x 42" direct-acting, high pressure (Shepard Iron Works, Buffalo, NY)	202'3" x 32'3" x 13'3"	Foundered, Oct. 18, 1870 (off Buffalo, NY)	3 (VI:309); 5; 6; 7 (213)

Vessel Name	Year Built	Tons	Builder	Owners	Engine Type	Dimensions	Remarks	Source
<i>Topsy</i> (C*)	1856	231	Augustin Cantin, Montreal, QC	Edmonstone, Allen, & Co.				5
<i>Transit</i> (C*)	1856	109	Myers, Toronto, ON			115' x 17' x 5'	Burned, May 7, 1880 (Belleville, ON)	5; 6
<i>Uncle Ben</i> (A†)	1856	155.36	Bidwell & Banta, Buffalo, NY	Bidwell & Banta		95' x 20'6" x 9'	Lost, 1865 (Cape Hatteras, Atlantic Ocean)	2; 5; 7 (217)
<i>Union</i> (C*)	1856	1190	Chalres Hunt, Windsor, ON	Great Western Railway Co.	Horizontal	163' x 33'3" x 10'	Burned, 1876	3 (IV:323)
<i>Victoria</i> (C*)	1856	392	Augustin Cantin, Montreal, QC	Richelieu Steamboat Co.		167'4" x 25'2" x 8'3"	Dismantled, Mar. 9, 1890	5
<i>Wabash Valley</i> (A†)	1856	592.97	Bidwell & Banta, Buffalo, NY	Bidwell & Banta		166' x 32'9" x 11'9"	Grounded, Nov. 22, 1860 (near Muskegon, MI)	5; 6; 7 (224)
<i>Webb, B.L.</i> (A†, aka <i>Marquette</i>)	1856	843 43/95 [856]	G.B. Russell Shipyard; Joseph A. Jenkins (carpenter), Detroit, MI	Detroit & Lake Superior Iron Manufacturing Co.	Two 24" x 36" engines, high pressure (Detroit Locomotive Works, Detroit, MI)	183'1" x 36'5" x 15'8"	Burned, Nov. 13, 1856 (Waiska Bay, Lake Superior); converted to barge, 1870	5; 6; 7 (16)
<i>Wellington</i> (C*)	1856	519	Henry Rooney, Garden Island, ON	Hooker, Jacques, & Co.	(from <i>Britannia</i> , 1833)	171'4" x 25'4" x 10'4"	Sank, 1875 or 1876	5
<i>Western Metropolis</i> (A*)	1856	1861.21 [1860]	Bidwell & Banta; Vincent Bidwell (carpenter), Buffalo, NY	Michigan Southern Railroad Co.	75" x 144" vertical walking beam (Merrick & Towne, Philadelphia, PA- from <i>Northern Indiana</i> , 1852)	321'10" x 39'10" x 14'2" [321' x 39'10" x 14'2"]	Converted to bark, 1862	2; 3 (III:345); 5; 7 (228)
<i>Whitby</i> (C†)	1856	361	Augustin Cantin, Montreal, QC	H. Jones & Co.			Collided w/ steamer <i>Osprey</i> , Nov. 1866 (St. Lawrence River)	5
<i>Witch of the West</i> (A†)	1856	38 [23; 12]	William Cramp, Philadelphia, PA [Petty's Island, NJ]		16" x 17", 60hp, high pressure	59' x 13'5" x 5'	Burned, 1904	5; 6; 7 (234)

Vessel Name	Year Built	Tons	Builder	Owners	Engine Type	Dimensions	Remarks	Source
<i>Abbey, Jessie P.</i> (A†)	1857	41.33 [26.04]	VanSlyke & Notter, Buffalo, NY		30hp	58' x 13'6" x 5'6"	Broken up, 1882	5
<i>Aid</i> (C*)	1857	102	Augustin Cantin, Montreal, QC	George Smith				5
<i>Alliance</i> (A*)	1857	85 [107]	Bidwell & Banta; Jacob W. Banta (carpenter), Buffalo, NY	Absalom Bull		87' x 16'1" x 6'1"	Wrecked, Nov. 23, 1869 (Buffalo, NY)	5; 6; 7 (7)
<i>Arms, C.G.</i> (A*)	1857	55	Newago, MI				Abandoned, 1859	5
<i>Avon</i> (C†)	1857	347 [304]	George Thurston; John Counter (carpenter), Kingston, ON	Hooker, Pridham, & Co.		132'3" x 23'4" x 10'5"	Grounded & broke up, Oct. 14, 1869 (near Presque Isle, MI)	5; 6
<i>Blish, Elisha C.</i> (A†)	1857	107 11/95	Charles Hinman, Black River, OH	Blish, Galick & Co., George H. Hobbs	Two 11.5" x 20" engines	81' x 15.81' x 9'	Foundered, Aug. 31, 1864 (off Lexington, MI)	5; 6; 7 (61)
<i>Brooks, S.C.</i> (A†)	1857	62	J.W. Lent, Erie, PA	Scott & Hearn			Abandoned, 1868	5; 7 (189)
<i>Burlington</i> (A†)	1857	384 74/95 [277]	Daniel O'Connor, Buffalo, NY	Old Oswego Line [Henry Fitzhugh, Dewitt C. Littlejohn]	24" x 36", low pressure (Swartz Foundry, Buffalo, NY)	144' x 25'4" x 11'1" [137' x 25' x 12']	Burned, Aug. 24, 1895 (Meldrum Bay, Lake Huron)	5; 6; 7 (26)
<i>City of Buffalo</i> (A*)	1857	2026 [2200]	Bidwell & Banta, Buffalo, NY	Michigan Southern Railroad Co.	76" x 144" vertical walking beam (Morgan Iron Works, New York, NY- from NORTHERN INDIANA, 1852)	331' x 40' x 15'6" [331'2" x 40' x 15'6"; 340' x 40' x 16']	Converted to propeller, 1863; burned, Jul. 31, 1866 (Buffalo, NY)	2; 3 (IV:40); 5; 6; 7 (37)
<i>City of Cleveland</i> (A*)	1857	788	Bidwell & Banta, Buffalo, NY	Bidwell & Banta	45" x 144", low pressure (Buffalo Steam Engine Works, Buffalo, NY- from <i>Garden City</i> , 1853)	227'9" x 30'6" x 11'9"	Wrecked in storm, Oct. 39, 1868 (off Erie, PA)	5; 7 (37)
<i>City of Madison</i> (A†)	1857	394 53/95 [487]	VanSlyke & Notter, Buffalo, NY	Elijah K. Bruce	Vertical direct-acting, high pressure (David Bell Works, Buffalo, NY)	134'3" x 26"2" x 12'1"	Burned, Aug. 17, 1877 (off Kenosha, WI)	3 (III: 77); 5; 6; 7 (37)

Vessel Name	Year Built	Tons	Builder	Owners	Engine Type	Dimensions	Remarks	Source
<i>City of Superior</i> (A†)	1857	578	Lafrinier & Stevenson, Cleveland, OH	Hanna, Garretson, & Co.	Two 24" x 36" engines, high pressure (Cuyahoga Steam Furnance Co., Cleveland, OH)	190' x 29' x 11'	Grounded, wrecked, Nov. 11, 1857 (Copper Harbor, Lake Superior)	5; 6; 7 (38)
<i>Clinton, H.P.</i> (A†, aka <i>Mystic</i>)	1857	67 83/95 [60]	Daniel O'Connor, Buffalo, NY	John Z. Quackenbush		71'4" x 16'4" x 6'5" [67' x 16' x 8']	Rebuilt/renamed, 1876; lost, 1879	5; 6; 7 (91)
<i>Comet</i> (A†)	1857	621.90 [744]	Peck & Masters, Cleveland, OH	New York Central Railway Co.; Dean Richmond (president)	24" x 36" vertical direct-acting, high pressure	181'3" x 29' x 12'6" [181'2" x 29' x 13'3"]	Collided w/ steamer <i>Manitoba</i> , Aug. 26, 1875 (off Whitefish Point, Lake Superior)	3 (V:73); 5; 6; 7 (42)
<i>Dacotah</i> (A†, aka <i>Dakotah</i>)	1857	698 31/95 [709; 688]	Luther Moses, Cleveland, OH	Dean Richmond, Ansel R. Cobb [James Clark, et al]	50" x 40" oscillating, low pressure (Cuyahoga Steam Furnance Co., Cleveland, OH)	193' x 30' x 12'6" [193.74' x 30.61' x 12.5']	Grounded, Nov. 24, 1860 (off Angola, NY)	3 (IV:73); 5; 6; 7 (50)
<i>Desalaberry</i> (C*)	1857	350	Augustin Cantin, Montreal, QC	L. Reneau, et al		157'3" x 25' x 7'5"		5
<i>Dubuque</i> (A†)	1857	399 74/95	Daniel O'Connor, Buffalo, NY	Henry Fitzhugh, Dewitt C. Littlejohn		139'11" x 26' x 11'9"	Converted to barge, May 14, 1877; grounded, Sep. 6, 1877 (Long Point, Lake Erie)	5; 7 (57)
<i>Eclipse</i> (A†)	1857	620 65/95	Francis N. Jones, Buffalo, NY	New York Central Railroad Co.; Dean Richmond (president)	High pressure	184' x 31' x 11'6"	Grounded & wrecked, Oct. 30, 1874 (Black River, OH)	5; 7 (60)
<i>Ely, John</i> (A†)	1857	29 65/95	VanSlyke & Notter; George H. Notter (carpenter), Buffalo, NY			47' x 12'9" x 5'7"	Abandoned, 1890	5; 7 (113)

Vessel Name	Year Built	Tons	Builder	Owners	Engine Type	Dimensions	Remarks	Source
<i>Equator</i> (A†, aka <i>El Dorado</i>)	1857	620 65/95 [621]	Francis N. Jones, Buffalo, NY	New York Central Railroad Co.; Dean Richmond (president)	Oscillating	184' x 31' x 11'6"	Rebuilt/renamed, 1871; wrecked, Nov. 20, 1880 (Erie, PA)	5; 6; 7 (66)
<i>Equinox</i> (A†)	1857	620 65/95	Frederick N. Jones, Buffalo, NY	New York Central Railroad Co.; Dean Richmond (president)	448hp oscillating	184' x 31' x 11'6"	Foundered, Sep. 10, 1875 (off Big Sable Point, Lake Michigan); abandoned, 1876	5; 6; 7 (66)
<i>Forest Queen</i> (A*)	1857	109 34/95	Jacob Medler, Grand Rapids, MI	William T. Powers		129'1" x 18'7" x 4'4"	Abandoned, 1862	5; 7 (74)
<i>Fountain City</i> (A†)	1857	820 41/95 [969; 805]	Peck & Masters, Cleveland, OH	Western Transportation Co. [John Ball]	32" x 42", high pressure (Cuyahoga Steam Furnance Co., Cleveland, OH)	209.86' x 30.20' x 13.40'	Burned, May 5, 1896 (Sturgeon Bay, WI)	3 (III:143); 5; 6; 7 (75)
<i>Galena</i> (A†)	1857	709 [690]	Luther Moses, Cleveland, OH	James F. Clark, et al	50" x 40" oscillating (Cuyahoga Steam Furnance Co., Cleveland, OH)	190'2" x 30' x 19'4" [193.74' x 30.61' x 12.5']	Grounded, Sep 25, 1872 (Thunder Bay, MI)	3 (IV:105); 5; 6; 7 (78)
<i>Gunnison, A.C.</i> (A†, aka <i>CSS A.C.</i> <i>Gunnison</i>)	1857	52 56/95	Theodore Burley, Philadelphia, PA				Served in Confederate Navy, 1861 (Mississippi River)	5; 7 (1)
<i>Hart, A.E.</i> (A†, aka <i>John Gordon</i> ; <i>J.W.</i> <i>Gordon</i>)	1857	71 14/95	VanSlyke & Notter, Buffalo, NY	David Bell		68'6" x 15'2" x 7'6"	Rebuilt/renamed several times; burned, 1870	5
<i>Hunter</i> (A†)	1857	667 7/95	Jacob W. Banta, Buffalo, NY	William Dixon, Robert Montgomery, et al	32" x 39", high pressure (Shepard Iron Works, Buffalo, NY)	192'8" x 30'6" x 11'11"	Converted to a barge, Sep. 13, 1870; wrecked, Sep 28, 1872	3 (V:149); 5; 7 (98)
<i>Kansas</i> (A†)	1857	62 90/95	William McAllister, Grand Rapids, MI			104' x 20' x 3'3"	Abandoned, 1859	5; 7 (119)

Vessel Name	Year Built	Tons	Builder	Owners	Engine Type	Dimensions	Remarks	Source
<i>Lacrosse</i> (A†)	1857	397 76/95	Daniel O'Connor, Buffalo, NY	Elijah K. Bruce		140' x 25'83" x 11.75'	Burned, 1860; left Lakes for Galveston, TX, 1861	5; 7 (123)
<i>Lady Jane</i> (A*)	1857	46 [40]	Berlin, WI				Lost, 1865	5; 7 (123)
<i>Leviathan</i> (A†)	1857	315 64/95 [232]	Benjamin B. Jones, Buffalo, NY	Lake Navigation Co.; H.C. Walker (president)	Two 24" x 26" engines	175'2" x 29'1" x 10'6" [126' x 26' x 11']	Burned, Nov. 28, 1891 (Cheboygan, MI)	5; 6; 7 (126)
<i>Levy, J.P.</i> (A†, aka <i>John P. Levy</i>)	1857	59	Raney, Neafie & Co., Philadelphia, PA	S. Flanagan			Abandoned, 1898	5; 7 (115)
<i>Lyon, L.L.</i> (A†)	1857	138 84/95	Roderick Calkins, Cleveland, OH	Abner Stone, James Crosby	25" x 28", 400hp, 110rpm, high pressure (Cuyahoga Steam Furnance Co., Cleveland, OH)	88'10.2" x 18'1.92" x 9'3.84"	Abandoned, Aug. 14, 1905	5; 7 (122)
<i>Major Dana</i> (A†)	1857	31	F.M. Lawler, Albany, NY		65hp	57'1" x 13'3" x 4'8"	Converted to schooner, Sep. 8, 1896; abandoned, 1903	5; 7 (135)
<i>Martin, H.N.</i> (A†)	1857	89 34/95	Francis N. Jones, Buffalo, NY	Harvey M. Mirer	Two 16" x 18" engines, high pressure	72' x 16' x 8'6"	Abandoned, 1882	5; 7 (91)
<i>Martin, John</i> (A†)	1857	169 91/95 [132; 83]	Martin & Quayle, Cleveland, OH	E. Dailey		101'4" x 19'3" x 9'4"	Foundered, Jul. 26, 1890 (off Hope Island, Lake Huron)	5; 6; 7 (114)
<i>Mendota</i> (A†)	1857	709 70/95 [785]	Luther Moses, Cleveland, OH	James F. Clark, et al	50" x 40" oscillating (Cuyahoga Steam Furnance Co., Cleveland, OH)	193.74' x 30.61' x 12.5' [192' x 30' x 11']	Foundered, Sep. 10, 1875 (off Big Sable Point, Lake Michigan)	3 (III:225); 5; 6; 7 (143)
<i>Miner</i> (A*)	1857	40.47	Gordon Campbell & Co.; John L. Wolverton (carpenter), Detroit, MI	E.M. Livermore	12" x 30" (J.B. Wayne & Co., Detroit, MI)	80' x 16' x 3'	Abandoned, 1862	5; 7 (145)

<i>Vessel Name</i>	<i>Year Built</i>	<i>Tons</i>	<i>Builder</i>	<i>Owners</i>	<i>Engine Type</i>	<i>Dimensions</i>	<i>Remarks</i>	<i>Source</i>
<i>Missouri</i> (A†)	1857	588.68 [530; 282]	VanSlyke & Notter; George H. Notter (carpenter), Buffalo, NY	Western Transportation Co.; Pearl L. Sternburg (president)		185'6" x 27'2" x 12'2"	Burned, Feb. 21, 1891 (Detroit, MI)	5; 6; 7 (147)
<i>Morgan, William</i> (A†)	1857	83 [86]	Thomas Dobbie, Oswego, NY	Ald. Dobbie	140hp (Philadelphia, PA)		Lost, 1875	5; 7 (231)
<i>Mosher, A.C.</i> (A†)	1857	63	Hillman & Streaker, Philadelphia, PA	Alfred Mosher	17" cyl.	70' L.		5
<i>Nebraska</i> (A*)	1857	114	Grand Rapids, MI				Abandoned, 1864	5; 7 (153)
<i>Newago</i> (A*)	1857	30	Grand Rapids, MI				Abandoned, 1859	5
<i>North America</i> (A†)	1857	397 82/95 [398]	Luther Moses, Cleveland, OH	Luther Moses		152.74' x 26.8' x 10.32' [153' x 27' x 11']	Burned, Jul. 1, 1858 (St. Clair Flats, MI)	5; 6; 7 (159)
<i>Oswego</i> (A†)	1857	166 [148; 98]	Hillman & Streaker, Philadelphia, PA	Joseph L.D. Kimball, et al	Two 22" x 22", 204hp engines (Philadelphia Engine Works)	98'6" x 19'4" x 9'4" [97' x 19' x 9']	Burned, Oct. 10, 1891 (off Windsor ON)	5; 6; 7 (166)
<i>Ottawa</i> (C*)	1857	72	John Closs, Alymer, QC					5
<i>Ozaukee</i> (A*)	1857	102.77	L.L. Slyfield, Port Washington, WI	Alva Trowbridge		92'8" x 17'5" x 6'5"	Grounded, May, 27, 1884 (near Ashland, WI)	5; 7 (166)
<i>Pearl</i> (A*)	1857	60	Oshkosh, WI	A. Neff, et al		105' x 19' x 4'6"	Abandoned, 1879	5; 7 (169)
<i>Perry, Hiram Jr.</i> (A†)	1857	75 [79]	G.R. Rogers, Oswego, NY	Peter P. Wright	Two 17" cly., 140hp engines (Talcott & Underhill, Oswego, NY)	80' x 17'2" x 7'	Sold foreign, 1869	5; 7 (96)
<i>Quincy</i> (A†)	1857	396 2/95	C.A. VanSlyke, Buffalo, NY	Elijah K. Bruce, Henry Fitzhugh, Dewitt C. Littlejohn	24" x 36"	135'6" x 26'2" x 12'	Left Lakes for Boston, MA, 1862; foundered, 1863	5; 7 (179)
<i>Rapid</i> (A†)	1857	77	Bidwell & Banta, Buffalo, NY				Abandoned, 1879	5; 7 (181)
<i>Red Eric</i> (A†)	1857	94 59/95	VanSlyke & Notter, Buffalo, NY	David Bell		84' x 16'4" x 7'5"	Dismantled, 1876 or 1878	5; 7 (182)

Vessel Name	Year Built	Tons	Builder	Owners	Engine Type	Dimensions	Remarks	Source
<i>Reed, J.H.</i> (A†)	1857	68.88	Philadelphia, PA					5
<i>Reindeer</i> (A†)	1857	201.55	Campbell & Co.; S.C. Keeler (carpenter), Detroit, MI	E.C. Merrick	(Kellogg & Co.)	101'6" x 22'8" x 10'	Sold foreign, 1864; burned, Aug. 31, 1881 (Quebec)	5; 7 (182)
<i>Rocket</i> (A†)	1857	611 13/95	Peck & Masters, Cleveland, OH	New York Central Railroad Co.; Dean Richmond (president)	Vertical beam engine, high pressure [low pressure] (Cuyahoga Steam Furnance Co., Cleveland, OH) [15" x 16" oscillating]	181.07' x 29.20' x 12.12'	Converted to barge, Oct. 2, 1877; abandoned, 1877	3 (V:237); 5; 7 (187)
<i>Ryerson, Martin A.</i> (A†)	1857	120 54/95	William McAllister, Grand Rapids, MI	Martin Ryserson, Robert W. Morris		88'9" x 18'4" x 9'	Abandoned, 1870	5; 7 (138)
<i>Shuano City</i> (*, aka <i>Shewano City</i>)	1857	44					Stranded, 1861	5
<i>Sprague, Noah P.</i> (A†)	1857	173	F.N. Jones, Buffalo, NY	Johnson, et al	Two 20" x 20" engines, high pressure	98'6" x 20' x 9'6"	Sold foreign, 1862; foundered, Jul. 23, 1884 (near Rondeau, ON)	5; 6; 7 (158)
<i>St. Andrew</i> (C*)	1857	98	L. Laborti, Montreal, QC			90' x 11'	Explosion, 1866	5
<i>St. Mary</i> (A†)	1857	62 23/95	VanSlyke & Notter, Buffalo, NY			64' x 15' x 7'2"	Burned, Dec. 1, 1885 (off Glen Haven, MI)	5; 6; 7 (192)
<i>Swan</i> (A*)	1857	30 21/95	Sandusky, OH	John Karcher, et al		67'7" x 17'9" x 2'10"	Abandoned, 1862	5; 7 (206)
<i>Tillinghast, Thomas A.</i> (A†)	1857	37.22 [53]	Athens, NY				Lost, 1887 or 1888	5; 7 (211)
<i>Transit</i> (C*)	1857	82	Myers, Toronto, ON	Beckett & Brother				5
<i>Ward, John P.</i> (A*, aka <i>J.S. Seaverns</i>)	1857	160.79 [173]	John Stupinsky, Detroit, MI	U.S. Government		113'10" x 20' x 7'6"	Rebuilt/renamed, 1878; stranded, May 12, 1884 (near Michipicoten Island, Lake Superior)	5; 6; 7 (115)

Vessel Name	Year Built	Tons	Builder	Owners	Engine Type	Dimensions	Remarks	Source
<i>Welland</i> (A†)	1857	29	VanSlyke & Notter, Buffalo, NY					5
<i>Wenona</i> (A†)	1857	709 [688.4]	Luther Moses, Cleveland, OH	Dean Richmond, Ansel R. Cobb	50" x 40" oscillating (Cuyahoga Steam Furnance Co., Cleveland, OH)	193.74' x 30.61' x 12.5' [192.91' x 30.5' x 12.28']	Converted to schooner barge, 1877	3 (V:291); 5; 7 (227)
<i>Whalon, Samuel S.</i> (A†)	1857	31	VanSlyke & Notter, Buffalo, NY	David Bell			Sold foreign, 1865	5; 7 (194)
<i>White, John B.</i> (A†)	1857	39 79/95	VanSlyke & Notter; George H Notter (carpenter), Buffalo, NY	David Bell		51'6" x 13' x 6'6"	Torpedoed, Jan. 1, 1864	5; 7 (112)
<i>Witt, Stillman</i> (A†)	1857	127.97	Daniel O'Connor, Buffalo, NY	William J. Farrell	18" x 16" (McGinnies & Co., Albany, NY)	88' x 17'5" x 9'	Abandoned, 1866 or 1882	5; 7 (204)
<i>Alida</i> (A†)	1858	23	William Crosthwaite, Buffalo, NY	T. Justin			Abandoned, 1871	5; 7 (7)
<i>America</i> (A†)	1858	70	Burley & Son, Philadelphia, PA					5
<i>American Eagle</i> (A†)	1858	63	William Crosthwaite, Buffalo, NY					5
<i>Bell, Jennie</i> (A†)	1858	48 [46]	Abernathy & Reed; Joseph Sloane (carpenter), Buffalo, NY	Hensler & Nice			Abandoned, 1873	5; 7 (111)
<i>Boole, L.H.</i> (A†)	1858	30 65/95	Leonard D. Book, Milwaukee, WI	F. Starke		46' x 12.6' x 6.25' [60' x 13' x 6']	Stranded, Oct. 9, 1872 (South Haven, MI)	5; 6; 7 (122)
<i>Buffalo</i> (A†)	1858	31	Dane, Buffalo, NY			47' x 13'2" x 6"	Wrecked, Nov. 15, 1883 (Port Huron, MI)	5; 7 (26)
<i>Canada</i> (C†)	1858	143	Detroit, MI				Sank, 1883 (off Rockport, MI)	6
<i>Columbia</i> (C*)	1858	517	Louis LaVontia, Montreal, QC	Louis Perrault		211'3" x 24'4" x 8'6"	Engine removed, May 16, 1868	5

Vessel Name	Year Built	Tons	Builder	Owners	Engine Type	Dimensions	Remarks	Source
<i>Eagle</i> (A†)	1858	25	New London, WI				Burned, Apr. 1877 (Oshkosh, WI)	5
<i>Experiment</i> (A*)	1858	123 48/95	Asa R. Swift, Detroit, MI	Asa R. Swift		96'6" x 18'10" x 7'		5
<i>Fannie</i> (A*)	1858	75 15/95	Brownsville, PA			120' x 34' x 3'8"	Abandoned, 1862	5; 7 (70)
<i>Forest City</i> (C*)	1858	104	Hastings, ON				Abandoned, 1875	5
<i>Gazelle</i> (A*)	1858	422	John L. Wolverton, Newport (Marine City), MI	Eber B. Ward	Vertical walking beam (from <i>Buckeye State</i> , 1851)	176' x 27' x 11' [190' x 27' x 11'; 156' x 27' x 11']	Grounded, Sep. 8, 1860 (<i>Eagle</i> Harbor, Lake Superior)	5; 6; 7 (79)
<i>Governor Cushman</i> (A†)	1858	384 66/95	Luther Moses, Cleveland, OH	Dwight Scott, et al	16" x 28" (Blish & Garrick)	152' x 26.45' x 10.15'	Boiler explosion, May 1, 1868 (Buffalo, NY)	5; 6; 7 (87)
<i>Governor King</i> (A†)	1858	45 [43]	Abernathy & Reed, Buffalo, NY	David Bell			Abandoned, 1876	5; 7 (47)
<i>Kelloha</i> (A†)	1858	396 25/95	John C. McGregor, Newport, MI	John C. McGregor		188' x 25' x 8'8"	Lost, 1862	5; 7 (120)
<i>Kilboa</i> (A*)	1858	396	Detroit, MI					5
<i>Little Pearl</i> (A*)	1858	23						5
<i>Magnet</i> (A†)	1858	10 10/95	R.J.I. Cooper, Buffalo, NY	H.B. Tibbets		32' x 9'6" x 3'10"	Abandoned, 1874	5; 7 (134)
<i>Martin, Maria</i> (A†)	1858		James Harley, Cleveland, OH		12hp (Blish, Garlick, & Co., Cleveland, OH)	40' x 11' x 5'6"	Collided w/ steamer <i>City of Buffalo</i> , Jun 13, 1859 (Cleveland, OH)	5
<i>Northern Light</i> (A†)	1858	744	Lafrenier & Stevenson, Cleveland, OH	Leonard Hanna, Hiram Garretson, Robert Hanna, John Spalding	Two 40" x 36" vertical walking beam engines, low pressure (Cuyahoga Steam Furnance Co., Cleveland, OH)	200' x 30' x 12' [216' x 30' x 12']	Converted to barge, Apr. 23, 1873; abandoned, 1883	3 (IV:223); 5; 7 (159)

Vessel Name	Year Built	Tons	Builder	Owners	Engine Type	Dimensions	Remarks	Source
<i>Okonra</i> (C†)	1858		Capt. E. Dunn, Owen Sound, ON	Capt. E. Dunn			Burned, Sep. 5, 1878 (Georgian Bay)	
<i>Pierrepoint</i> (C*)	1858	134 29/95	Charles Jenkins, Kingston, ON	George M. Kingston		120' x 15'4" x 6'6"	Broken up, 1871	5
<i>President</i> (A†)	1858	86	Buffalo, NY				Abandoned, 1874	5; 7 (177)
<i>Rescue</i> (A†, aka <i>Waters M. Braman</i> ; <i>Walter W. Braman</i>)	1858	89	Boston, MA	U.S. Quatermaster Corps.			Burned, Jun. 26, 1867 (off Pelee Island, Lake Erie)	5; 6; 7 (255)
<i>Ruggles</i> (A†)	1858	104.65	C.A. VanSlyke, Buffalo, NY	Erastus S. Prosser	Two engines	92'8" x 17'3" x 7'	Lost, 1891 or 1901	5; 7 (189)
<i>Scotchman</i> (C*)	1858	90	Quebec, QC			105' x 20'6" x 7'5"	Broken up, 1879	5
<i>Smith, T.C.</i> (A*)	1858	300	Eber B. Ward, Detroit, MI					5
<i>Snow Bird</i> (C*)	1858	87	John Cass (or Glass?), Portage du Fort, QC					5
<i>Susquehanna</i> (A†)	1858	435 57/95	Luther Moses; Philo P. Moses (carpenter, Cleveland, OH)	Philo P. Moses	High pressure (Globe Iron Works)	161.92' x 26.85' x 10.57'	Abandoned, 1880	5; 7 (206)
<i>Terry, Ellen S.</i> (A†, aka <i>Don E. Dickinson</i>)	1858	259.93 [354; 268]	Samuel Harlan, Jr., Wilmington, DE	O.G. Terry	28" x 26", high pressure (Harlan & Holingsworth, Wilmington, DE)	148' x 23' x 8'6"	Rebuilt/renamed, 1881; burned, Oct. 11, 1888 (near Belle Isle)	5; 6; 7 (63)
<i>Victoria</i> (C†)	1858	64	Lake Simcoe, ON			73' x 16' x 7'		5
<i>Wack, Charles</i> (A†)	1858		VanSlyke & Notter, Buffalo, NY	Capt. Sanderson				5
<i>Wolf</i> (A†)	1858	72.21	New London, WI	Enos F. Drummond		95' x 24'6" x 3'6"	Abandoned, 1860	5; 7 (234)
<i>Yamaska</i> (C*)	1858	97.33	Augustin Cantin, Montreal, QC			134' x 22.33' x 7.25'	Collided w/ sailing vessel, 1868	5

Vessel Name	Year Built	Tons	Builder	Owners	Engine Type	Dimensions	Remarks	Source
<i>Akron</i> (A†)	1859	367 15/95	Martin & Quayle, Cleveland, OH	Northern Transportation Co.; Philo Chamberlin, John H. Crawford		135.03' x 22.7' x 11.27'	Burned, Sep. 17, 1873	5; 7 (4)
<i>Albert</i> (*)	1859	12				50' x 9'		5
<i>Belden, Seymour</i> (A*)	1859	51	Norton & Leland, Cleveland, OH					5
<i>Bemis, Philo S.</i> (A†, aka <i>A.J. Bemis</i>)	1859	47 [49; 29]	William Crosthwaite, Buffalo, NY			50' x 12' x 6'	Burned, Sep. 14, 1872 (near Alpena, MI)	5; 6; 7 (172)
<i>Bonnie Boat</i> (A*, aka <i>Bonnie Maggie</i>)	1859	132 [203; 125]	Joseph M. Keating, Huron, OH [Sandusky, OH]	B.F. Smith	22" x 60" (Camp & Johnson- from <i>Fremont</i> , 1851)	110'6" x 18'4" x 6'11"	Grounded, Oct. 14, 1869 (near Kincardine, ON)	5; 6; 7 (23)
<i>Canada</i> (C*)	1859	60	Quebec, QC			82' x 17'	Broken up, 1862	5
<i>City of Buffalo</i> (A†)	1859	128	Buffalo, NY				Converted to barge, 1871	5; 7 (37)
<i>Comet</i> (A*)	1859	350 80/95 [275]	Eber B. Ward; R.C. Cornwall (carpenter), Newport (Marine City), MI	Eber B. Ward	36" x 120" vertical walking beam (rebuilt by Detroit Locomotive Works, Detroit, MI)	155'3" x 24'6" x 9'7" [158' x 24'6" x 9'7"]	Converted to barge, Jul. 21, 1870; abandoned, 1883	3 (V:77); 5; 7 (42)
<i>Defiance</i> (A†)	1859	51 [30]	Gay & Fordham, Sandusky, OH	Ryer & Hubbard		70'6" x 14'4" x 5'6"	Collided w/ schooner <i>Jupiter</i> , Jul. 1870 (Saugatuck River, MI)	5; 7 (52)
<i>Detroit</i> (A*)	1859	1039 31/95	Mason & Bidwell; Andrew S. Mason (carpenter), Buffalo, NY	Julius Movius	69" x 144", 1050hp vertical walking beam (Shepard Iron Works, Buffalo, NY)	239' x 34'4" x 13'2"	Foundered, Sep. 29, 1872 (off Greenbush, MI)	3 (V:89); 5; 6; 7 (54)
<i>Experience</i> (A†)	1859	19 14/95	James Miller, Chicago, IL	James Miller		46'9" x 12'8" x 3'8"	Abandoned, 1861	5; 7 (68)
<i>Gold Hunter</i> (A†)	1859	9 6/95	B. Burling, Buffalo, NY	Western Transportation Co.		18' x 7'5" x 8'5"	Abandoned, 1861	5; 7 (86)

Vessel Name	Year Built	Tons	Builder	Owners	Engine Type	Dimensions	Remarks	Source
<i>Julien</i> (A†)	1859	46	Doolittle & Miller, Chicago, IL	E. Prindville				5
<i>L'Assomption</i> (C*, aka <i>Chambly</i> ; <i>Ste. Helene</i>)	1859	366 [221]	Augustin Cantin, Montreal, QC	Terrebonne & L'Assomption Navigation Co.		143' x 22' x 7'		5
<i>Little Eastern</i> (A*)	1859	32 87/95 [38]	McDermott & Co.; J. Elliott (carpenter), Detroit, MI	William Henry Elliott		55'4" x 15' x 5'6"	Collided w/ steamer <i>Fox</i> , Jun. 29, 1861 (Saginaw River); abandoned, Dec. 16, 1881	5; 6; 7 (129)
<i>Maria, Ella</i> (A*)	1859	17 41/95	Russel R. Woodruff, St. Charles, MI	Russel R. Woodruff, Seth Woodruff		70' x 8'9" x 2'10"	Abandoned, 1861	5; 7 (62)
<i>Michigan</i> (A†, aka <i>HMS Prince Alfred</i>)	1859	271	Robert Steed, Sarnia, ON	Grand Trunk Railway; John Pridgeon	30" x 30" direct-acting, high pressure (Bartley & Gilbert, Montreal, QC)	153'9" x 26'8" x 9'2"	Purchased by Canadian Government, renamed, 1866	3 (II:207); 5
<i>Midland City</i> (A*)	1859	49	Midland City, MI				Abandoned, 1861	5; 7 (145)
<i>Milwaukee</i> (A*)	1859	1039	Mason & Bidwell; Andrew S. Mason (carpenter), Buffalo, NY	Detroit & Milwaukee Railroad; Julius Movius	Vertical walking beam (Shepard Iron Works, Buffalo, NY)	239' x 34'4" x 12'2"	Grounded, Oct. 9, 1868 (off Grand Haven, MI)	3 (V:177); 5; 6; 7 (145)
<i>Queen of the Isles</i> (C†)	1859	17	Brockville, ON					5
<i>Redpath, John</i> (C*)	1859	100	William Powers, Montreal, QC	C. Copeland				5
<i>Rumsey, Julian S.</i> (A†, aka <i>Nellie</i>)	1859	47	Doolittle & Miller, Chicago, IL				Renamed, Oct. 26, 1865; abandoned, 1884	5
<i>Scugog</i> (C*)	1859	60	Bridgenorth, ON			100' x 13'5" x 3'9"		5

Vessel Name	Year Built	Tons	Builder	Owners	Engine Type	Dimensions	Remarks	Source
<i>Seabird</i> (A*, aka <i>Sea Bird</i>)	1859	638 42/95	Eber B. Ward; R.C. Cornwall (carpenter), Newport, MI	Emily Ward, David Gallagher	Vertical walking beam	191'6" x 27'9" x 12'6" [197'6" x 27'9" x 12'6"]	Burned, Apr. 9, 1868 (off Waukegan, IL)	3 (VI:283); 5; 6; 7 (197)
<i>Seymour, Belle</i> (A*)	1859	51	Norton & Leland, Cleveland, OH	N.D. White		90' x 16' x 3'	Wrecked, 1868 (Tittabawasee River, MI)	5
<i>Stemberg, Pearl L.</i> (A*)	1859	109	Buffalo, NY				Abandoned, 1861	5; 7 (169)
<i>Sturgis, George</i> (A†)	1859	46 [47]	Doolittle & Miller, Chicago, IL	E. Prindville			Abandoned, 1865	5; 7 (84)
<i>Swift, Oliver L.</i> (A†)	1859	45 38/95	William Crosthwaite, Buffalo, NY	David Bell	(D. Bell, Buffalo, NY)	57'5" x 13'6" x 6'6"	Wrecked, 1868 (Buffalo, NY)	5; 6; 7 (163)
<i>Torch Lake</i> (A†)	1859	13 [20; 6]	R. Calkins, Cleveland, OH	William Beasley		37' x 10' x 5'	Foundered, Nov. 1864 (near Sturgeon Bay, WI)	5; 6; 7 (214)
<i>Valley City</i> (C*)	1859	76	John Malcomson, Hamilton, ON	A. MacTaggart	(Gartshore & Co., Dundas, ON)	90' x 14'2" x 6'2"	Possibly dismantled, 1869	5
<i>Velie, Colonel H.K.</i> (A†)	1859	105	Buffalo, NY				Abandoned, 1864	5; 7 (41)
<i>West</i> (C†)	1859	385	Augustin Cantin, Montreal, QC	Millar & Co.		137'5" x 26 x 11'3"	Lost, Dec. 1865 (Gulf of St. Lawrence)	5
<i>Allison, B.C.</i> (A†)	1860	11	Clayton, NY					5
<i>Belle</i> (A†)	1860	129 44/95	D.M. Hagadorn, Port Huron, MI	D.M. Hagadorn	(from <i>Genessee</i> , 1852)	90' x 19'8" x 7' [91' x 10' x 8']	Burned, Nov. 20, 1869 (off Port Washington, WI)	5; 6; 7 (19)
<i>Brown, Daniel</i> (A†)	1860	35 [37]	William Crosthwaite, Buffalo, NY	Morgan & Chase			Abandoned, 1874	5; 7 (50)
<i>Chippewa Valley</i> (A†)	1860	101	Eau Clair, WI				Snagged, Apr. 30, 1864 (Cumberland River)	5; 7 (35)
<i>Clara</i> (A†)	1860	77 37/95	J. Stupinsky, Detroit, MI	McAlpine & Campbell	18" x 18", high pressure (J.B. Wilson, Detroit, MI)	71' x 18' x 6'5"	Dismantled, 1894	5; 7 (38)

<i>Vessel Name</i>	<i>Year Built</i>	<i>Tons</i>	<i>Builder</i>	<i>Owners</i>	<i>Engine Type</i>	<i>Dimensions</i>	<i>Remarks</i>	<i>Source</i>
<i>Cleveland (A†)</i>	1860	375 40/95 [286]	Martin & Quayle, Cleveland, OH	Northern Transportation Co.	26.5" x 30", 330hp, 85rpm, high pressure (Blish & Garick)	136' x 25.8' x 11.47' [150' x 25'6" x 11'6"]	Rebuilt, 1867; burned, Jul. 29, 1880 (near Charity Island); dismantled, 1901	3 (II:49); 5; 6; 7 (39)
<i>Davidson, B.F. (A†)</i>	1860	32 64/95	Chicago, IL	William Lurkin, Henry Greenleaf		48'8" x 11'8.5" x 6'2"	Abandoned, 1870	5; 7 (16)
<i>Dorr, E.P.(A†)</i>	1860	51 68/95	Daniel O'Connor, Buffalo, NY	David Bell		62' x 13'6" x 6'9"	Sold foreign, 1863; broken up, 1900	5; 7 (58)
<i>Doyle, J.H.(A†)</i>	1860	45	George H. Notter, Buffalo, NY					5
<i>Eagle, James E.(A†)</i>	1860	194 58/95 [137]	Charles Hinman (Hindman?), Algonac, MI	Michael B. Kean		118'11" x 20'5" x 8'6" [120' x 21' x 8']	Burned, Aug. 8, 1869 (near Bay City, MI)	5; 6; 7 (108)
<i>Ellwood (A*)</i>	1860	200 [171]	DePere, WI				Burned, Apr. 16, 1865 (Hatchie River, TN)	5; 7 (63)
<i>Essex (C*)</i>	1860	141 [94; 52]	Henry & Shadrack Jenkins, Windsor, ON	Henry & Shadrack Jenkins	19" x 54", high pressure (Hyslop & Cleghorn, Chatham, ON)	81' x 19' x 8'	Burned, 1884 (Sarnia, ON); abandoned, 1886	5; 6
<i>Etoil (C*, aka L'Etoile)</i>	1860	69	William Powers, Montreal, QC				Foundered, Aug.1870	5
<i>Fisherman (A*)</i>	1860	39	Mackinac, MI					5
<i>Grenville (A†)</i>	1860	21	Buffalo, NY					5
<i>Hooker, J.H. (A*)</i>	1860	258	Whitehall, NY				Abandoned, 1877	5; 7 (105)
<i>Islander (A*)</i>	1860	37 14/95 [47]	J.R., A.W., & George Hulbert, Mackinac, MI	J.R., A.W., & George Hulbert		57'2" x 12'9" x 5'9"	Foundered, Mar. 31, 1875 (Chicago, IL)	5; 6; 7 (104)
<i>Lady Franklin (A†)</i>	1860	58	Martin & Quayle, Cleveland, OH	Edward Lockwood, et al	20" x 24" (Blish, Garlick, & Co., Cleveland, OH)	62.95' x 14.33' x 7.6'	Sold foreign, 1870; broken up, Aug. 5, 1881	5; 7 (123)
<i>Last Witness (A†)</i>	1860	34 68/95	Lafrinier & Stevenson,	Francis Crawford		53'2" x 13' x 5'7"	Abandoned, 1878	5; 7 (125)

Vessel Name	Year Built	Tons	Builder	Owners	Engine Type	Dimensions	Remarks	Source
			Cleveland, OH					
<i>Lewis, Samuel</i> (A†)	1860	102	Godfrey Canton, Detroit, MI	James J. Lewis		63' x 17'	Wrecked, Nov. 12, 1871 (Cape Croker, Georgian Bay)	5
<i>Lincoln</i> (A†)	1860		Mackinac, MI	Allen Hulbert, George Kirtland, F.J. Hulbert				5
<i>Mac</i> (A†)	1860	18 [15]	Algoma, ON			45'2" x 14'7" x 5'7"		5
<i>Mariner</i> (A*)	1860	104 20/95	Joseph A. Jenkins, Detroit, MI	George B. Russell		81' x 25' x 6'	Burned, Nov. 20, 1869 (Chatham, ON)	5; 6; 7 (136)
<i>McClellan, George B.</i> (A†)	1860	47.34	B.F. Benjamin, Chicago, IL	Martin Green, et al	15" x 15" (Henry Warrington Works, Chicago, IL)	58' x 15' x 7'	Burned, Jan. 31, 1905	5; 6; 7 (83)
<i>Merchant</i> (A†)	1860	16.03 [8.02]	J. Britton, Ferrysburg (Grand Haven), MI	VanAhoof	12hp	45' x 9' x 4'4"	Converted to barge, Mar. 31, 1904	5
<i>Montreal</i> (C*)	1860	710	Gilbert & Bartley, Montreal, QC			262' x 33'3" x 9'2"	Dismantled, 1914	5
<i>Nichols, L.H.</i> (A†)	1860	32	Buffalo, NY				Abandoned, 1869	5; 7 (122)
<i>Portage</i> (A*)	1860	80						5
<i>Prince of Wales</i> (C*)	1860	295	Augustin Cantin, Montreal, QC	Isaac J. Gibb, et al	36" x 96" vertical walking beam (George Bush, or Brush, Montreal, QC)	153'1" x 23'3" x 7'7"	Dismantled, 1894	5
<i>Queen Victoria</i> (C*)	1860	651	Augustin Cantin, Montreal, QC	Ottawa River Navigation Co.	Vertical walking beam (Bartley & Gilbert, Montreal, QC)	169'5" x 23'3" x 7'6"	Burned, Sep. 13, 1883 (near Chatham, ON)	5
<i>Saguenay</i> (C*)	1860	634					Burned, 1884 (St. Lawrence River)	5
<i>Star</i> (A†, aka <i>Star No. 1</i>)	1860	23 2/95	W.D. Lewis, Detroit, MI	W.D. Lewis, John N. Stewart		42'5" x 12'5" x 6'	Burned, Dec. 24, 1868 (Saginaw, MI)	5; 7 (202)

Vessel Name	Year Built	Tons	Builder	Owners	Engine Type	Dimensions	Remarks	Source
<i>Steeves, Colonel M. (A†)</i>	1860	44.06	Racine, WI [Milwaukee, WI]	Milwaukee, Chicago & St. Louis Steam Towing & Freight Co.		76' x 16' x 4'	Abandoned, 1862	5; 7 (41)
<i>Tiger (A†)</i>	1860	26 53/95	VanSlyke & Notter; George H. Notter (carpenter), Buffalo, NY	Henry B. Tibbits		41'2" x 10'10.5" x 5'3.5"	Foundered, Nov. 20, 1869 (off Sheboygan, WI)	5; 6; 7 (212)
<i>Valley City (A*)</i>	1860		William C. Hayden, Grand Haven, MI	Capt. Gance		140' x 21' x 5'	Converted to barge, 1869	5
<i>William (C*)</i>	1860	428.22	Calvin Co. Shipyard; Henry Rooney (carpenter), Garden Island, ON	Delano D. Calvin, Ira A. Breck	55" x 96", 220hp, 14rpm (Bennett & Henderson, Kingston, ON- from <i>William</i> , 1831)	141'6" x 25' x 11'6"	Broken up, Mar. 12, 1878	5

APPENDIX B

ENROLLMENT DOCUMENTATION FOR STEAMBOAT *ANTHONY WAYNE*

The following is from CLUE member Jim Paskert in which he discusses obtaining copies of the enrollment documents for *Anthony Wayne*:

“The enrollments were obtained by myself from the National Archives, Judicial, Fiscal and Social Branch (NNFJ), Washington, DC 20408 in June, 1982 by submitting NATF Form 24, “Order for Copies of Documents Issued to Vessel” with the required information (Name of Vessel, Dates of Operation, Tonnage, Rig, Date Built, Place Built, Home Port, Operator, etc.) relative to the *Anthony Wayne* provided. I am sure of the date, etc. because I have the original NATF Form 24 on which I requested the documents (the procedure at that time included returning the original, date-stamped form to you with the documents). The copies supplied to me by NARA are on 11x17 paper and have the NARA reproduction ink stamp on the backside. Any paper copies I disseminated are 8.5x11 reduction copies made by myself of my 11x17 1982 NARA paper copies of the paper originals. I would have made these copies at the time I provided them. Any electronic copies I have disseminated (PDF, JPG, TIF) are scans made by myself of my 11x17 1982 NARA paper copies of the paper originals. All electronic copy files were created between Aug, 2007 and Apr, 2008. My 11x17 1982 NARA copies were made by NARA from the paper originals. Nothing in this collection was made from a microfilm copy.

The NNFJ (Judicial, Fiscal and Social Branch) disappeared in the middle or late 1980’s when NARA was reorganized. The formal and simple procedure for obtaining vessel documents, including NATF Form 24, disappeared with it and was never replaced. One can still obtain documents but the procedure is not as straight forward as it was years ago and NARA is not jumping through hoops to make it easy.

Although NARA was reorganized the records were not. Vessel documents are still part of the Records of the Bureau of Marine Inspection and Navigation, Record Group 41 with the original documents stored at NARA, Washington, DC. Some documents have been microfilmed although the collections are very incomplete. For more about vessel documents use the following link to NARA’s website at:

<http://www.archives.gov/genealogy/maritime/vessel-documents.html#intro>”

1838Enrollment



IN CONFORMITY to an Act of the Congress of the United States of America, entitled "*An Act for Enrolling and Licensing Ships and Vessels,*" &c. passed the 18th of February, 1793; and "*An Act to regulate the Foreign and Coasting Trade on the Northern, Northeastern and Northwestern Frontiers of the United States, and for other purposes,*" passed the 2d March, 1831. *And a law for the better security of the line of Passengers &c. Passed the 7th July 1839. William Hollister of Buffalo New York*

having taken or subscribed the Oath required by said Acts, and having sworn that he *agrees with the Brethren of the Poughkeepsie & Miami Steam Boat Company*

Citizens of the United States, sole owners of the *Steam Boat* or Vessel called the *Anthony Kayne* whereof *Amos Pratt* is at present Master; and, as he hath *sworn* is a Citizen of the United States, and that the said Ship or Vessel was built at *Poughkeepsie Ohio* in the year 1837 as appears by *the Enrollment dated at the Port of Mammee City August 3rd 1838 and sundry other*

And *the said Enrollment* having certified that the said *Steam Boat* Vessel has *Two Decks* and *One Mast* and that her length is *One Hundred and Fifty Six Feet* her breadth *Twenty Five Feet and nine inches* her depth *Ten Feet and Seven inches* and that she measures *Four hundred & Ninety* tons *Forty six* ninety-fifths; that she is a *Steam Boat* has *no Gallies* and a *Small* head.

And the said *William Hollister* having agreed to the description and admeasurement above specified, and sufficient security having been given in conformity with the terms of the said acts, the said *Steam Boat* has been duly Enrolled at the Port of Buffalo Creek.

Given under my Hand and Seal of Office, at the Port of Buffalo Creek, in the said District, this *Twenty eighth* day of *September* in the year one thousand eight hundred and thirty-*four*. *W. J. E. Smith*
Secy. Co. U.

1844 Enrollment

PORT OF DETROIT.

71

Enrollment:



No. ~~111~~ *Twenty four*

In Conformity to An act of the Congress of the United States of America, entitled "An act for enrolling and Licensing Ships or Vessels;" &c., passed the 18th February, 1793, and "An act to regulate the Foreign and Coasting Trade on the Northern, North-eastern and North-western Frontiers of the United States, and for other purposes;" passed the 2nd March, 1831 and an act to provide for the better humanity of the laws affecting the Commerce of Africa, passed in whole or in part by laws passed 7th July 1842.

William H. Collins agent for Benjamin F. Fifield of Illinois slaveowner having taken or subscribed the oath required by the said Acts, and having sworn that Benjamin F. Fifield William B. Sterling George H. May of Illinois slaveowners together with other stockholders of the *Poughkeepsie and Albany Steamboat Company* being

Citizens of the United States, sole owners of the Steam Boat or Vessel called the *Anthony Hoynes* of *Albany* whereof *Leslie H. Scott* is at present Master; and as he hath sworn, is a Citizen of the United States, and that the said Steamboat or Vessel was built at *Poughkeepsie N.Y.* in 1837, as appears by his last enrollment dated at the Port of *Albany* N.Y. 20th Feb. 1843 now shown by reason of a change of destination to *Albany*

And said Enroller having verified that the said Steamboat or Vessel has *Three decks* and *one masted* and that her length is *One hundred and fifty* feet *two* inches, her breadth *Twenty five* feet *seven* inches, her depth *Four* feet *three* inches, and that she measures *Three Hundred and* tons *four* hundred and *ninety* and *five* hundredths; that she is a *Steam boat* has *two* *engines* and *is* *not* *rigged* *for* *sailing*

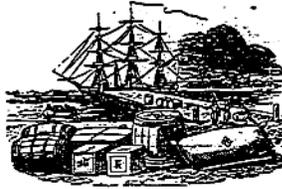
And the said *William H. Collins* agent for *Benjamin F. Fifield* having agreed to the description and dimensions above specified, and sufficient security having been given in conformity with the terms of the said acts, the said *Steam boat* has been duly enrolled at the Port of Detroit.

Given under my hand and Seal at the Port of Detroit, this *17th* day of *July* in the year of our Lord one thousand eight hundred and forty *four*

1846 Enrollment

PORT OF DETROIT.

Enrollment:

No. ~~123~~

In Conformity to An act of the Congress of the United States of America, entitled "An act for enrolling and Licensing Ships or Vessels;" &c., passed the 18th February, 1793, and "An act to regulate the Foreign and Coasting Trade on the Northern, North-eastern and North-western Frontiers of the United States, and for other purposes;" passed the 2nd March, 1831, and an act approved for the better security of the laws of said States, on board of steam vessels passed July 7 1838. and an act to modify the same approved 5 March 1845

George D. Perkins of Messrs Messier & Michigan having taken or subscribed the oath required by the said Acts, and having sworn that he together with Edward J. Morton of the same place and stockholders of the Champaign and Miami Steam Boat Company all

Citizens of the United States, sole owners of the Steam Boat or Vessel called the Autograph of Messrs whereof George D. Perkins is at present Master; and as he hath sworn, is a Citizen of the United States, and that the said Steam Boat or Vessel was built at Champaign Ohio in 1837, as appears by the Enrollment dated at the Port of Detroit the 19th day of July 1846 No 24, now amended by reason of a change of owner

And John C. Enrollment having certified that the said Steam Boat or Vessel has three decks and one mast and that her length is two hundred and fifty six feet two inches, her breadth twenty five feet nine inches, her depth ten feet three inches, and that she measures Three hundred and twenty tons forty nine ninety-fifths; and a single head.

And the said George D. Perkins having agreed to the description and measurement above specified, and sufficient security having been given in conformity with the terms of the said acts, the said Steam Boat has been duly enrolled at the Port of Detroit.

Given under my hand and Seal at the Port of Detroit, this 12th day of June in the year of our Lord one thousand eight hundred and forty: Six

1849 Enrollment

PORT OF DETROIT.

Enrollment:



No. *Sturtevant* (13)

In Conformity to An act of the Congress of the United States of America, entitled "An act for enrolling and Licensing Ships or Vessels," &c., passed the 18th February, 1793, and "An act to regulate the Foreign and Coasting Trade on the Northern, North-eastern and North-western Frontiers of the United States, and for other purposes," passed the 2nd March, 1831, and Acts passed the 7th June, 1854 & 3rd March, 1853 Regulating Trade in whales or in part by steam" Charles Howard of the City of Detroit Wayne County Michigan having taken or subscribed the oath required by the said Acts, and having sworn that he is a

Citizen of the United States, sole owner of the Steam Boat or Vessel called the *Anthony Wayne* of Detroit whereof *C. J. Heath* is at present Master; and as he hath sworn, is a Citizen of the United States, and that the said Steam Boat or Vessel was built at *Detroit Mich* in 1849, as appears by the Certificate of *W. Bonaker* Superintendent of said *Detroit Mich* 24th April 1849

And *William Howard* having certified that the said Steam Boat or Vessel has *one deck* and *one mast* and that her length is *one hundred and fifty five* feet *two* inches, her breadth *thirty seven* feet *four* inches, her depth *ten* feet *two* inches, and that she measures *four hundred* tons *Eighty* ninety-fifths; that she is a Steam Boat *has no* Gallies and *no* masts head;

And the said *Charles Howard* having agreed to the description and measurement above specified, and sufficient security having been given in conformity with the terms of the said acts, the said *Steam Boat* has been duly enrolled at the Port of Detroit.

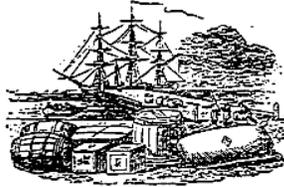
Given under my hand and Seal at the Port of Detroit, this *twenty first* day of *April* in the year of our Lord one thousand eight hundred and forty *nine*.

W. Howard
Wm. Howard

1850 Enrollment

PORT OF DETROIT.

Enrollment:



No. 7

In Conformity to An act of the Congress of the United States of America, entitled "An act for enrolling and Licensing Ships or Vessels," &c., passed the 18th February, 1793, and "An act to regulate the Foreign and Coasting Trade on the Northern, North-eastern and North-western Frontiers of the United States, and for other purposes," passed the 2nd March, 1831,

Charles Hammond of the City of Detroit Wayne County Michigan commanding

having taken or subscribed the oath required by the said Acts, and having sworn that he together with G. C. Lane

Citizens of the United States, sole owners of the Steam Boat or Vessel called the Landing Wagon of Detroit whereof G. C. Lane is at present Master; and as he hath sworn, is a Citizen of the United States, and that the said Steamboat or Vessel was built at Grand Haven Michigan in 1849, as appears by the Enrollment dated at the Port of Detroit April 21st 1849, and recommended by reason of change of owners

And said Enrollment having certified that the said Steam Boat or Vessel has one Deck and one Mast and that her length is one hundred and fifty feet and her breadth twenty seven feet and her depth ten feet and that she measures four hundred tons and eighty nine-fifths; and that she is a Steam Boat has no Gun Deck and no Mast

And the said Charles Hammond & G. C. Lane having agreed to the description and measurement above specified, and sufficient security having been given in conformity with the terms of the said acts, the said Steam Boat has been duly enrolled at the Port of Detroit.

Given under my hand and Seal at the Port of Detroit, this 11th day of April in the year of our Lord one thousand eight hundred and forty nine

M. H. [Signature] Deputy Collector

APPENDIX C

CORONER'S INQUEST ON *ANTHONY WAYNE*(Published in *Daily Sanduskian* 30 April 1850, 2)

CORONER'S INQUEST

Held Monday, April 29, 1850, on the bodies taken from the wreck, and from the water near the wreck of the steam boat GEN. WAYNE, the boiler of which exploded off Vermillion, Sunday morning, April 28, 1850.

Jurors drawn and Sworn as follows:

Sam'l B. Caldwell,
 Wm. H. Caswell,
 Sam'l W. Butler,
 Solomon C. Moore,
 Theron Goodwin,
 Harlow Case.

Jas. H. Starkweather, 2d mate: John Johnson, wheelsman: James Edgcomb, 1st mate, sworn.

Mr. Edgcomb was asleep when the explosion took place. States that he has known the boat ever since she first came out, about 1834. Went on board as mate in April. She left Toledo on Saturday morning at half past 9, April 27. She had 30 persons on board belonging to the boat. That they took about 30 passengers at Toledo. Came into Sandusky, and left between 9 and 10 o'clock, Saturday evening - were on their course to Cleveland, steering E. $\frac{1}{2}$ S.

When about 18 miles from the mouth of Sandusky Bay, and off Vermillion, the boiler exploded. Was in company with the SUPERIOR, which was about 40 rods ahead when they left the last stake at Sandusky Bay. Got up jib and then lowered the boat, and soon found the boat was sinking, and then called to the passengers to get on the hurricane deck. Capt. Gore got on deck at the same time. Took on board 11 persons, including one child, besides himself, and was then told by captain to go for assistance if he could take no more. Was hailed from the wreck and told to go for help. Saw a vessel and told Capt. G. he would go to her - fell in with the ELMINA, Capt. Nugent, about 5 miles from the wreck - nearly west - which went immediately to their relief. He reached the ELMINA about 3 o'clock. No sea running to disturb small boats, and little wind. Capt. Gore went into the boat and took 6 persons and made for shore, with pieces of board, having lost an oar, which he (Edgcomb) had given him. He recognized the bodies of Mr. Hart, a drover, residing near Perrysburg - was taken off from the wreck - a body was taken from the water one mile from the wreck, with two pillows tied to him under his

arms - does not know his name. Also the body of the first cook taken from the wreck dead. A female, wounded in the head, was taken off dead - she came on board at Toledo. This body was not in the water, but died on the wreck. The 1st engineer, Mr. Ellmore, died on board the schooner Elmina. Mr. Freeman, deck hand, died after leaving schooner and on board the steamer ISLANDER, while coming into Sandusky Bay, from Kelley's Island. There were 19 persons, dead and alive, taken up, who belonged to the steamboat- four dead and fifteen living. There were 3 passengers and 3 hands with Capt. Gore, viz: clerk, fireman and deck hand. States that the WAYNE was rebuilt in 1848 and '49, and furnished with entirely new boilers throughout. Was well acquainted with first Engineer Ellmore- knew him to be a careful and steady man and a good officer. The boat was well supplied with a full complement of small boats, viz: yawl and two life boats. One of the life boats was blown off and lost by the explosion. States that the Wayne was rather short of fuel, and engine did not fire up until after arrival of cars at Sandusky at 9 o'clock pm. Thinks the boat was not being crowded to more than usual speed. Edward Burchard was 2nd engineer, lived in Collins, Erie Co., NY, was a sober man, and a Son of Temperance, and is among the missing. Knows that the steward, Henry Sturgess of Mt. Clemens, Mich., and the bar-keeper, Mead of Detroit, are both missing.

(Signed) JAMES EDGCOMB

Mr. Starkweather, 2nd mate, concurs in Mr. Edgcomb's statements, except as to time. Thinks they left Sandusky later than 10 o'clock. Noticed time about 5 minutes before the explosion- it was then 15 minutes to 1 o'clock. Knows of no disposition to keep up with the S.B. SUPERIOR. Asked 1st engineer, who said "No, we can do nothing with that boat." Capt. Gore turned in $\frac{3}{4}$ of an hour before the explosion. SUPERIOR was 4 or 5 miles ahead. Got into small boat with Mr. Edgcomb, when the hull was sinking. Heard Capt. G. from life boat call to first mate in the yawl boat to get all into his boat that he could, "for God's save the ladies." That he (Capt. G.) could not manage his boat- had water in her, and she was leaking. Thinks the boat sunk in 10 or 15 minutes after the explosion. That Capt. G. came on deck after the explosion with him, and there went off over the broken part of the boat, and probably on one of the boilers, which had been thrown up and lay athwart ships- a dangerous place to pass. That they had as many as the yawl could carry in conditions to manage.

(Signed) J.H. STARKWEATHER

John Johnson, wheelsman, concurs with Edgcomb's statement, got into yawl with him and commenced picking up passengers and others from the water. Say he knew both engineers- that Ellmore, first engineer, had charge at the time of the explosion. Second engineer had turned in. They were both steady and sober men.

Charles J. Smith, passenger, resides in Hinsdale, Mass., got on board at Sandusky. States about 25 passengers who came in the cars with him, went on board in company. Was told by the captain that the boat was new and the boilers new- that he had expended about \$25,000 on her in fitting out. That he took a ticket at the office from a man who

called himself the captain of the boat while in the cars. Took a room (letter M) after having been twice been into the cabin to examine. They left the dock about 10 o'clock. Heard the remark that the WAYNE would pass the SUPERIOR before they got to Cleveland, which was about half a mile ahead when going out of the bay. Thinks that nearly or quite 40 passengers went on board at Sandusky. Was asleep when the explosion took place. After coming out the first he saw was the boats around the wreck. Saw three in the yawl-boat, playing around the wreck and picking up persons. Saw 9 in. Saw the boat sinking - threw over dining table, and saw 4 men get onto to it - one of them was the captain. Heard several persons call to the captain to come and save them - heard no reply. The deck parted in two parts and separated some rods. Saw and counted 12 living persons on the forward deck, and 17 in the after deck. Saw the yawl-boat go around the wreck, but saw the life-boat with the captain leave wreck apparently as soon as he could get away, although called to by myself to save the children, and by others for help, but saw no person taken on board life-boat. The water was filled with persons all around the wreck, and all around said life-boat. Saw further, this life-boat making among these persons and heard one man call several times "For God's sake captain, save me," but saw him take in none. Described the captain as about the size of Coroner Wade- thick, stout built man - thinks he wore a black hat or cap, and about 40 years old. He lost his trunk containing several notes, one against his brother, Asa Smith, for \$500, a draft for some \$1,700, and letters to him at Cincinnati - a russet leather trunk of large size, with a brass lock, heart-shaped, and a spring over the key-hole.

(Signed) CHARLES J. SMITH

Edward Cavanaugh, of Troy, N.Y. Thinks the man Mr. Smith calls the captain, was the clerk. Did not hear the calls made to the captain, testified to by Smith. Heard a woman call for help. Saw both boats going around the wreck. Saw the captain some time around the wreck in his boat - heard him call several times to persons, giving direction what to do. Heard him tell them to throw off floats to get on. Thinks Capt. G's boat would have been in danger if he had come near the wreck, as they all knew the wreck was sinking. Knew J.W. Doty of Warsaw, Ill., was lost. Saw him on the wreck, and afterwards could not see him. Saw 3 persons in the boat with the captain. Thinks he might have saved one woman some 12 feet distance from him.

(Signed) EDWARD CAVANAUGH

Archer Brackney of La Fayette. Was going to Philadelphia, where his family resided. Got on at Toledo, at Sandusky saw quarreling and much drinking in the saloon, and an Irish passenger, drunk, but none among the hands. After the explosion, saw and helped to launch the life-boat, filled half full of water. Saw two persons jump in and swim to it. Next saw the captain in it. Called to him to save his children. Heard several calls to come and save woman and children, a*** (missing) promise, if they would do so, that they (missing) would not get in. He launched a box containing his wife's body and jumped over with his two children and got onto the box- it turned with him and he lost his children. Left the box and got his children again and got back to wreck with them. The girl clung to his neck and was saved- the boy was lost. The life-boat left the wreck

in 10 minutes after she was launched- 2 were bailing and the captain was rowing the boat off in a straight line from the wreck- could not tell the direction; but by the wind, next morning, judged the direction to be towards the shore. Saw the yawl-boat pass several times around the wreck, apparently examining the wreck. Saw also several (2 or 3) persons get down from the wreck into it. Thought the officers in the boat were doing their duty. Saw the female before alluded to, on board the packet-boat on Maumee canal- canal packet SULLIVAN. She said she was a widow- lost her husband in Cincinnati, and was going to her friends in New York state- was between 40 and 45 years of age. Her dress and bonnet was black and black net or crape cap.
(Signed) ARCHER BRACKNEY

John Fairchild of Fort Wayne, Ind.- Confirms most of the statements before made, and saw the captain with the life-boat put off very soon after the hull of the steam-boat sunk- thinks the captain *neglected and deserted* persons who were calling for help- could not tell whether they were from the water or from the wreck.
(Signed) JOHN FAIRCHILD

Edmond Kellogg of Toledo. Got on at Toledo with wife and three children- all saved- sent to bed early- awoke half an hour before the explosion, and found the boat trembling badly, as though running faster than usual- afterwards found no sea to (missing) the trembling. Saw the yawl in the water- neglect calls that were made for the women and children with promises that the men should not get on board the small boat. They were unanswered. Then saw this yawl-boat com to the stem and the captain and others let down the cabin-maid, and then heard the captain tell them to "shove off as quick as you can," which was done, without taking women for whom calls had been made. The yawl then kept round 3 or 4 rods from the wreck- afterwards saw 8 or 9 persons in her. He heard the life-boat launch. Soon after this saw three men in her making off in a straight line, apparently skulking. Saw only 3 persons on board her while in sight. Heard a voice in the life-boat which he recognized as that of the captains'. The captain was in the cabin between 7 and 8 o'clock, and did not go (missing) in cars to Bellevue.
(Signed) EDWIN KELLOGG

N.W. Gann of Toledo- Confirms much of what before stated, but noticed no unusual trembling of the boat. Only saw the yawl boat. Did not notice (missing) wanton neglect on the part of the life-boat, but saw the yawl-boat passing round, but saw no person picked up. Did not see the life-boat- afterwards noticed 2 persons climbing into it.
(Signed) N.W. GANN

Mr. Edgcomb, re-called- States that Capt. Gore was not on the wreck when the cabin maid was let into the yawl; the life-boat was some eight or ten rods distant. That he came along side to take in some ladies, and did not know who the female was that was left on board, which proved to be the maid. That two or three persons jumped in same time filling the (missing) of the boat, her stern having been run near the side of the wreck. Saw danger of swamping, by persons jumping in and the motion of the wreck,

and shoved off. Was besought by Blon, then on a piece of wreck not to let one of his men drown, and replied "You are well enough off, there are many worse off than you are." After leaving the wreck, he picked up all he could reach who were alive in the water. Did not leave the wreck till after the hull sunk; was then told by those on the wreck to go for assistance, that all alive on the wreck were safe. When he left the boat saw but two persons with Capt. G. in the life-boat., both bailing with hats and Capt. G. with a board. When he last saw him thinks he had six or eight with him.

Mrs. Caroline Kimball, of Springfield, OH- Got on board at Sandusky, and retired soon after. Heard Mr. Freeman after the explosion give orders to put out the fire. F. assisted her on to the pilot house, from whence she was assisted into the yawl, (having her child tied to her,) and was the last person taken from the wreck.

Jane McCoy, of Buffalo, cabin maid- She called to the yawl from the wheel house. She jumped into the yawl, was not let drown. Capt. G. was not on the wreck at the time, but in the life-boat, could not tell how far off, but saw and recognized him. Saw the boat launched and thinks she partly filled with water. Thinks Capt. G. jumped into the water and then swam to the boat. Four persons, a lady and child and two men got into the yawl after herself; one of whom jumped in and one was taken from the water.

Antoine Blon, a deck hand from Trenton, Mich.- Was picked up by Capt. Gore from a piece of wreck, when twelve or fourteen rods off, and was the last person taken into the life-boat. This boat took six persons ashore, viz: Capt. Gore, clerk Vorce, fireman Tom Sullivan, two passengers and himself. On landing, Capt. G. after leaving directions to send all possible help, then procured a buggy at Vermilion and started for Sandusky.
(His X mark) ANTOINE BLON
Witness, H. Crane

John Williams, fireman, of Detroit- Saw Capt. G. and one other person get into the life-boat after she was launched. Assisted the cabin maid into the yawl. He then jumped into the water and swam to the yawl. Capt. G. was not on the wreck when this took place, but in the life-boat some distance from the wreck. Tried water ten minutes before the explosion, found two socks on one side and three on the other all flush. Witness tried three boilers, and a fireman another, and found the proper proportion of water. Heard the captain previous to leaving the wreck advise the passengers to prepare floats of any thing they could get. Never heard the engineer complain of the boilers. He called the attention of the engineer to a small leak, who replied that it was not dangerous as he had a small amount of steam on, the weight being at 75 pounds, without raising. On the previous trip and at other times they had carried 100 pounds. Says it was impossible for Capt. G. to get back to the wreck after leaving her for want of oars and winds being adverse. It would have been dangerous could he have done so. Heard the captain when in the boat direct and exhort the passengers what to do to get on to the upper deck as soon as possible.
(His X mark) JOHN WILLIAMS

Witness, H. Crane

Sandusky April 30th, 1850

To the Coroner of Erie County

The jury empanelled by you for the purpose, after a careful investigation, find, that the persons whose bodies were brought from the wreck of the steam-boat Gen. Wayne, came to their death, by, and in consequence of an explosion of a boiler of said boat about one o'clock on Sunday morning April 28th, the cause of which is unknown to the jury; there are six of these bodies only identified in port- and described as follows: Letter found on one person, addressed Myron Titus, Dayton, O., signed by S. Titus, Detroit, found also in pocket a silver watch and pencil and a pen-knife- had on blue pants, brown sack coat plaid lining- with velvet collar.

2d. Identified as one of the cooks, a mulatto, home unknown.

3d. Known as O.W. Hart, a drover from Perrysburgh, with cattle on board.

4th. That of a female, dressed in black, home unknown, had a bead purse, containing \$24.60 in bank bills, gold and silver.

5th. Is the body of J. Ellmore, 1st engineer, who died on board schooner Elmina after he was taken from the wreck.

6th. Is that of Franklin Freeman- body taken to Detroit.

7th. Person died at the North American Hotel in this city about 10 o'clock Sunday evening, this was a colored cook.

The jury have to state, that conclusive evidence has been produced to show that the boilers of said boat were manufactured by Wolcott and Savage of Detroit, and were put into the Wayne as entirely new, in spring of 1849- that one of the boilers had been patched or repaired over a fracture, and that this boiler did not explode- that the water in said boilers was examined about ten minutes, and again about five minutes previous to the explosion, and in both instances a full complement was found in them- that no disposition whatsoever has been shown to urge said boat into greater speed than usual- that the steam-boat SUPERIOR was about forty to eighty rods in advance of the WAYNE when the latter passed the alste stake at the mouth of Sandusky bay, and that a few minutes previous to the explosion, the SUPERIOR was from four to five miles ahead of the WAYNE- she having run at this time only about eighteen miles from Cedar Point light- that the engine was working under a weight of 75 pounds of steam without raising it- and that the same boilers previously, and on the previous trip, bore a weight of 100 pounds- that no evidence is found to show that any stoppage of water had occurred- that the evidence goes to show that all the officers were carefully attending to their proper duties, the usual watches having taken their stations, and those relieved retiring at the proper time- that after the explosion, the weight of testimony goes to show that every exertion which men could make was exercised by the officers- that the calmness and conduct of Messrs. Edgcomb and Starkweather, the first and second mates whose especial duty it became under the circumstances to afford relief, is worthy of all praise that their efforts were timely, and well made, both in saving and picking up passengers, and also in reaching the schooner Elmina, Capt. Nugent, who came to the relief of those on the wreck.

S.B. CALDWELL

W.H.CASWELL
S.W.BUTLER
T. GOODWIN
S.C. MORE
HARLOW CASE

APPENDIX D

CLEVELAND UNDERWATER EXPLORERS DIVE REPORT ON

ANTHONY WAYNE

CLUE, 2007-05-20 – Tom’s Paddlewheel Wreck

On Sunday, May 20, 2007, Tom Kowalczyk, David VanZandt, and Kevin Magee – all members of the Cleveland Underwater Explorers (CLUE) – went out on Lake Erie for the first dive of the season. They left from Tom’s marina on Tom’s boat *Dragonfly*, which is based in Marblehead near Sandusky. The day was sunny, breezy, and cool with an air temperature of about 60 deg F. The seas were initially about 2’-3’, but the wind was blowing briskly out of the northeast, causing whitecaps to form. By the time they reached the wreck site, the seas were 3’-4’.

The wreck is a new wreck found by Tom during the 2006 season in about 50’ of water. It appears to be broken with two major pieces but is potentially interesting since it appears to be the remains of a side paddlewheel steamer in the side scan images. Tom did not dive this wreck when it was found. The wreck was hooked, and Tom was the first to descend to investigate. Unfortunately, he discovered the anchor had missed the wreck and the wreck was not near the anchor. Bottom conditions were acceptable at a warm 55 deg F, bright ambient lighting, and 3’-5’ of visibility. After surfacing, surface conditions had deteriorated with waves building to 3’- 5’ seas. However, persistence prevailed, the wreck was relocated, and after several attempts, a good hook was obtained.

Since the seas were rough, Dave decided to remain aboard while Tom and Kevin investigated the wreck. Tom was the first to descend and found the anchor hooked on the SW corner of the wreckage. Moving forward towards the E, a paddlewheel and hub were immediately found. The paddlewheel is mostly broken, but parts of the lower half remain. A small standing portion of the hull’s side was also seen near the paddlewheel. It consisted of frames, ceiling, and planking. Turning towards the left (N) at the hub, the main shaft for the paddlewheel can be seen with mounting brackets holding the shaft in place. Continuing to the other paddlewheel, it appears to be in better shape with the upper half missing but the lower half mostly remaining. Measurements of this wheel resulted in an approximately 10’ radius (20’ diameter) and 8’ width. There are two sets of paddles side-by-side, and 2.5’ was measured for the outer paddle width. The shaft was not measured but was estimated to be 2’ to 2.5’ in diameter.

Moving back to the middle of the shaft, a yoke of two rods comes off the shaft and go up towards the E. After about 5’-8’, they are attached by a very large pin to a single

rectangular cross-sectional beam, Pittman arm, which appears to be made of metal with a large, prominent single row of Square nuts running down its length. It runs E downwards until it runs into the bottom near the base of what would appear to be a single standing vertical piston or exhaust header. The housing was estimated to be about 2.5' in diameter with an approximately 1' diameter hole on the top. Peering inside revealed it is almost completely filled with silt. No more wreckage to be seen beyond this point. Returning to the shaft, Tom reported seeing cradles, possible for the missing boilers, to the W. Also seen was a rope running along the length of the rectangular beam with a Y-splice halfway down its length. This could be a line from nets, although no nets were found. No boilers or engine were seen during the dive, but it is speculated the engine would be to the E if it exists. This would make the bow W and the stern E.

A maximum depth of 49' was obtained during the dive. Unfortunately, bottom visibility did not allow a better survey to be performed, and topside conditions did not allow another dive to be performed. A slow trip back to the marina was made through the heavy seas, and everyone was tired but happy upon reaching port. Further dives will need to be conducted on both sections in better visibility to further evaluate the wreckage and possibly determine its identity.

VITA

Bradley Alan Krueger received his Bachelor of Arts degree in anthropology from The University of Michigan at Ann Arbor in 2005. He entered the Nautical Archaeology Program in the Department of Anthropology at Texas A&M University in September 2007 and received his Master of Arts degree in May 2012. His research interests include Great Lakes maritime history, historical archaeology, nautical archaeology, wooden shipbuilding, and early American steamboats.

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