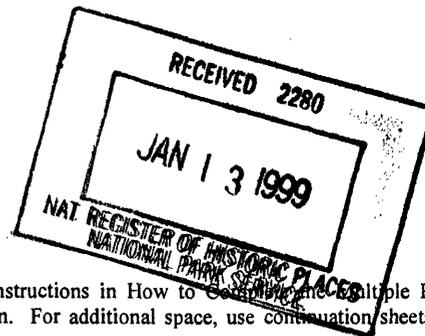


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National Park Service

National Register of Historic Places
Multiple Property Documentation Form



This form is used for documenting multiple property groups relating to one or several historic contexts. See instructions in How to Complete the Multiple Property Documentation Form (National Register Bulletin 16B). Complete each item by entering the requested information. For additional space, use continuation sheets (Form 10-900-a). Use a typewriter, word processor, or computer to complete all items.

New Submission Amended Submission

A. Name of Multiple Property Listing

Shipwrecks of Minnesota's Inland Lakes and Rivers (9,500 B.C. to A.D.1945)

B. Associated Historic Contexts

Pre-Contact Period (9500 B.C. to A.D. 1650)
Contact Period (1650 to 1837)
Post-Contact Period (1837 to 1945)

(for individual context listings see Table 1 on pages E-1 and E-2)

C. Form Prepared By

name/title Co-authored by Wes Hall, Sam Newell / Mid-Atlantic Technology and Environmental Research, Inc.; and Douglas Birk / IMA Consulting, Inc. (Minneapolis, MN)
street & number 441 Blossoms Ferry Road telephone 910-675-8270
city or town & state Castle Hayne, North Carolina zip code 28429

D. Certification

As the designated authority under the National Historic Preservation Act of 1966, as amended, I hereby certify that this documentation form meets the National Register documentation standards and sets forth requirements for the listing of related properties consistent with the National Register criteria. This submission meets the procedural and professional requirements set forth in 36 CFR Part 60 and the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation. (See continuation sheet for additional comments)

Ian R. Stewart
Signature and title of certifying official
Ian R. Stewart, Deputy SHPO

12/11/98
Date

Minnesota Historical Society
State or Federal agency and bureau

I hereby certify that this multiple property documentation form has been approved by the National Register as a basis for evaluating related properties for listing in the National Register.

Edson H. Beall
Signature of the Keeper

2.12.99
Date

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National Park Service

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E. STATEMENT OF HISTORIC CONTEXTS

Introduction

The SHPO for the State of Minnesota has developed a system of contexts for the state that has three tiers (MNSHPO nd). The first tier includes "Broad Statewide Contexts" or patterns that focus on the state's history and prehistory and are divided into three periods: Pre-Contact (9500 B.C. to A.D. 1650), Contact (1650 to 1837) and Post-Contact (1837 to 1945) (see Table 1). The second tier ("Thematic") is related to evaluating properties that are best understood within a more specific theme uncharacteristic or smaller than the broader statewide historical patterns. The third tier ("Local") includes contexts developed for a specific geographical area such as a city or townships.

Because of the diverse nature of shipwrecks or submerged vessels in Minnesota's inland waters, it is possible that a particular vessel or group of vessels may be evaluated within a Thematic or Local context, however, in most instances shipwrecks or vessels found in inland waters will fall into the first tier or Broad Statewide Contexts. More specifically, the majority of shipwrecks or vessels to be found in Minnesota's inland waters fall into the Post-Contact Period, although water craft were certainly used by peoples associated with all Contact Period contexts and were potentially used in all Pre-Contact contexts. The broad statewide contexts for Minnesota are listed below according to period and tradition.

Table 1. MINNESOTA HISTORIC CONTEXTS:

- PRE-CONTACT PERIOD (9500 B.C. to A.D. 1650)
 - Paleoindian Tradition (9500 to 6000 B.C.)
 - Clovis Complex**
 - Folsom Complex**
 - Plano Complex**
 - Archaic Tradition (6000 to 500 B.C.)
 - Shield Archaic**
 - Lake-Forest Archaic**
 - Prairie Archaic**
 - Eastern Archaic**
 - Woodland Tradition (500 B.C. to A.D. 1650)
 - Early Woodland**
 - Fox Lake**
 - Havana Related (Sorg, Howard Lake)**
 - Malmo**
 - Laurel**

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Table 1. MINNESOTA HISTORIC CONTEXTS continued

Brainerd
St. Croix - Onamia
Lake Benton
Late Woodland (Southeastern Minnesota)
Kathio
Blackduck
Wanikan (Sandy Lake)
Plains Village Tradition (A.D. 1000 to 1500)
Great Oasis
Cambria
Mississippian Tradition (A.D. 1000 to 1450)
Silvernale
Oneota Tradition (A.D. 1000 to 1650)
Blue Earth
Orr
CONTACT PERIOD (A.D. 1650 to 1837)
Native American
Eastern Dakota
Western Dakota
Ojibwe
Euro-American
French
British
Initial United States
POST-CONTACT PERIOD (A.D. 1837 to 1945)
Indian Communities and Reservations (1837 to 1934)
St. Croix Triangle Lumbering (1830s to 1900s)
Early Agriculture and River Settlement (1840 to 1870)
Railroads and Agricultural Development (1870 to 1940)
Northern Minnesota Lumbering (1870 to 1930s)
Minnesota's Iron Ore Industry (1880s to 1945)
Minnesota Tourism and Recreation in the Lake Regions (1870 to 1945)
Urban Centers (1870 to 1940)

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Pre-Contact Period (9500 B.C. to A.D. 1650)

Geographical Limits: Lakes and rivers throughout Minnesota (Figure 1)

The Pre-Contact Period (prehistoric period) spans over 10,000 years and is further subdivided into six major traditions: Paleoindian Tradition (ca. 9500 to ca. 6000 B.C.); Archaic Tradition (ca. 6000 to ca. 500 B.C.); Woodland Tradition (ca. 500 B.C. to A.D. 1650); Plains Village Tradition (A.D. 1000 to 1500); Mississippian Tradition (A.D. 1000 to 1450); and the Oneota Tradition (A.D. 1000 to 1650). All of these traditions have been developed and are based primarily on an association with an artifact assemblage and/or specific geographic areas. Thus, in order to relate a property type to a specific prehistoric context, the wreck or vessel must be found in association with artifacts characteristic of that tradition or must be dated and associated within a geographic area.

Intact examples of abandoned or wrecked aboriginal skin and bark boats are presently unknown in Minnesota. Between 1960 and 1976, archaeologists with the Quetico-Superior Underwater Research Project explored numerous fur-trade canoe accident and landing sites along Minnesota's northern border. No evidence of dugouts was recovered, and the only site to yield fragments of a birch-bark canoe (or canoes) was Fort Charlotte at the Pigeon River terminus of Grand Portage (Wheeler et al. 1975; Birk 1975). No bark or skin canoes should be expected to have survived in Minnesota's waters unless at or soon after abandonment they became embedded or buried in peat deposits or lake or river bottom sediments. Dugout canoes are less fragile and would survive for long periods of time in submerged environments. It would be an unexpected occurrence if any prehistoric vessel was found in association with the necessary material culture to place it within a specific tradition. Complete Pre-Contact contexts are not presented here because of the unlikelihood of a prehistoric vessel being found that can be associated with a specific tradition.

Associated Property Types

The known traditional aboriginal water craft of Minnesota's tribal peoples are bark and wood canoes, skin boats, and simple rafts. Although any of these vessels may have been used at one time or other on most of Minnesota's inland waterways, relatively few actual wrecked or abandoned examples have been reported. Some scholars suggest that the earliest form of water transportation in Minnesota was the dugout wooden canoe (e.g., Sackett 1936:7). Various accounts in the state's archaeological site files show that such vessels have been found "throughout the state" including places like Lake Auburn in Carver County, Lake Minnetonka in Hennepin County, Lake Traverse in Traverse County, near St. Anthony Falls in Hennepin County, and Rice Lake Wildlife Refuge in Aitkin County.

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Contact Period (1650 to 1837)

Geographical Limits: Lakes and rivers throughout Minnesota

The Contact Period spans 187 years and is further subdivided into two major cultural traditions: Native American and Euro-American. The Native American category has been further subdivided into three contexts: Ojibwe, Eastern Dakota, and Western Dakota. These are the recorded tribal groupings that were found in Minnesota at the time of first contact with Europeans, beginning around the mid-1600s. The Euro-American category has been divided into French, British, and Initial United States contexts. As in the Pre-Contact Period, the potential for associated property types are extremely limited.

NATIVE AMERICAN

The three Native American contexts – Ojibwe, Eastern Dakota, and Western Dakota – are not discussed in detail here because there currently are no known vessel wreck sites directly associated with them. There is, however, extensive historical knowledge of the types of vessels used by Native Americans in the Contact Period. In general, birch-bark canoes are associated with the Ojibwe in northern Minnesota, and dugout canoes are associated with the Dakota in southern Minnesota (Figure 2).

Long before the appearance of Euro-American in the 17th century, Minnesota's inland waters were linked by ancient portages (carrying places) that formed transportation routes and route networks. Between 1640 and the mid-1800s, the bark canoe and some of the established canoe routes also were adopted for use by Euro-American interlopers. Because portages enjoyed long temporal use, the archaeological record at such places may be key to dating the emergence, florescence, and Euro-American use of water transportation in various regions or watersheds. Similarly, archaeological sites found on abandoned shorelines or stream channels also might reveal how and when those areas were used by Pre-Contact and Contact period human groups (Birk 1991, 1996; Vogel and Stanley 1991).

The known traditional water craft of Minnesota's aboriginal peoples are bark and wood canoes, skin boats, and probably simple rafts. Although any of these vessels may have been used at one time or other, on most of Minnesota's inland waterways, relatively few actual wrecked or abandoned examples have been reported. Some scholars suggest that the earliest form of water transportation in Minnesota was the dugout wooden canoe (e.g., Sackett 1936:7). Various accounts show that such vessels have been found "throughout the State" as discussed in the previous section. It is further suggested that dugout canoes became larger and more common "after the introduction of modern tools" (Sackett 1936:7-8; Hoaglund 1911:111-12).

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Contact Period continued:

Intact examples of abandoned or wrecked aboriginal skin and bark boats are presently unknown in Minnesota. Between 1960 and 1976, archaeologists with the Quetico-Superior Underwater Research Project explored numerous fur-trade canoe accident and landing sites along Minnesota's northern border. Fragments of a birch-bark canoe (or canoes) were found at Fort Charlotte at the Pigeon River terminus of Grand Portage (Wheeler et al. 1975; Birk 1975). No aboriginal or fur-trade canoes should be expected to have survived in Minnesota's waters unless at or soon after abandonment they became embedded or buried in peat deposits or lake or river bottom sediments. Dugout canoes are less fragile and can survive for long periods of time in submerged environments as discussed in the previous section.

EURO-AMERICAN

The Euro-American contexts found within the Contact Period are primarily related to European exploration and fur trading. The period has been subdivided into French (1650 to 1803), British (1763 to 1816), Initial United States Presence (1803 to 1837) contexts. The French were the first European explorers to visit Minnesota. The driving force behind French explorations was the desire to extend Louis the XIV's claims to more territory. French ambitions were not for colonial expansion but in pursuit of the rich fur trade, particularly in beaver pelts. A fashion for beaver hats generated a great demand for pelts in Europe. As a result, French traders and trappers had depleted the beaver population in the lower St. Lawrence River by 1630s. As adjacent trapping grounds were also depleted, the French moved westward, channeled by their competitors the Hudson's Bay Company to the north and the English and Dutch to the south. The French dominated the fur trade within the present boundaries of Minnesota until the Treaty of Paris of 1763 when the French lost all of their territory east of the Mississippi River to the British. Because a trade pattern had long been established by the French that made Indians traders and trappers dependent on them for supplies, there was little time lost before the British took control of former French trading routes. Some of the trade was taken up by the Hudson's Bay Company, and the rest, including the territory encompassed by Minnesota, came under the control of a group of partners called the North West Company that were head-quartered in Montreal.

The North West Company controlled the fur trade in Minnesota until 1804 when legal control was given to American interests. The American Fur Company, formed in 1808, took over most of the Minnesota trade and was active until the 1840s. By then, the beaver population had been severely depleted in Minnesota, and principal European markets for furs had declined.

Because of the nature of most vessel types used on Minnesota's inland waters during the Euro-American Contact Period (i.e., birch-bark canoes and dugouts), few are expected to have survived unless soon after abandonment they became embedded or buried in peat deposits or lake sediments. Because of the current lack of known inland fur trade vessels, this limited Euro-American Contact Period overview has been presented here.

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Contact Period continued

Associated Property Types

The birch-bark canoe was the workhorse of the fur trade. Because some trade routes followed shallow rivers in Northern Minnesota and Wisconsin, Ojibwe canoe builders there created a distinctive regional variation of the bark canoe – with wide, flat bottoms – known as the Fond du Lac style (Birk 1989:7). The largest bark canoes to find use in Minnesota were those fur trade vessels like Bâtard and Montreal canoes used in hauling cargo on Lake Superior. Birch-bark canoes were faster, more maneuverable, and more easily portaged than dugouts. Furthermore, these canoes were common in lake-forest districts of northern Minnesota until the latter half of the 19th century. Dugouts or pirogues saw heavy use in riverine areas of southern Minnesota into the second quarter of the 19th century.

Euro-American explorers and traders introduced other vessel types to the Minnesota area as early as 1700. A French expedition under Pierre Charles Le Sueur arrived that year with a longboat, or felucca, from the Lower Mississippi Valley. In the late 1700s, Hudson's Bay Company traders plied the Red River with York boats at least as far up as Pembina (Birk 1989:28), and Montreal-based traders routinely operated sailing vessels on Lake Superior. Although the French had a decked vessel on Lake Superior by the mid-1730s (Nute 1944:117), the *Otter* – the first large sailing vessel known to enter what is now Duluth-Superior harbor – did so in the spring of 1794 (Birk 1989:26). The *Otter*, a sloop of 75-ton burden, also made regular runs to Grand Portage (Nute 1944:118). Later, American Fur Company traders probed the St. Louis River to Fond du Lac with mackinac boats. Indeed, fur trade sloops, schooners, and mackinac boats largely eclipsed the canoe on the south shore of Lake Superior by 1825 (Nute 1944:113-16).

When the American explorer Zebulon Pike traveled to the Mississippi Headwaters in 1805, he began his journey from St. Louis in a 70-foot keelboat. The boat was sailed, rowed, and poled upstream to Prairie du Chien where Pike exchanged it for two smaller bateaux. The bateaux were later portaged around St. Anthony Falls and taken nearly to Little Falls in central Minnesota. While there, Pike fashioned dugout canoes from pine trees, but he dallied so long in erecting a fort that he was later forced to abandon his water craft and complete his northerly expedition by walking on the ice (Jackson 1966).

As yet, no Contact Period craft have been discovered in the inland waters of Minnesota with the possible exception of the above mentioned birch bark canoe at Fort Charlotte. Although the potential for discovery of a vessel from the Contact Period context is limited, lakes on or near trade routes would appear to hold the greatest potential for sheltering these early and fragile property types.

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Post-Contact Period (1837 to 1945)

INDIAN COMMUNITIES AND RESERVATIONS (1837 TO 1945)

Geographical Limits: Lakes and rivers in the vicinity of Dakota communities and Ojibwe reservations

In the first half of the 19th century, Minnesota was included in the domain of two Native American tribes – the Dakota in the south and the Ojibwe in the north. Both native groups experienced more than 150 years of interrelations with Euro-American explorers, fur traders, trappers, and speculators. In 1837, eastern Dakota and southern Ojibwe groups ceded land east of the Mississippi River and below the mouth of the Crow Wing River to white settlement. This initial land cession permitted the development of the first permanent Euro-American settlements in Minnesota. In 1851, the Dakota ceded the remainder of their Minnesota lands (MnSHPO n.d.).

In northern Minnesota, the Ojibwe in 1847 gave up their land west of the Mississippi River and south of the Crow Wing River. By treaties during the following 20 years, the Ojibwe continued to lose their lands to Euro-American encroachment. Eventually, the only land still held by the Ojibwe was that now encompassed by the Red Lake Reservation (MnSHPO n.d.).

The treaties with the Ojibwe and Dakota, along with subsequent armed conflicts, resulted in subjugating the tribes and placing them on reservations. Many of the reservations were geographically related to lakes such as Leech Lake Reservation or rivers like a loose-knit Dakota Reservation 10 miles wide by 150 miles long on either side of the Minnesota River in southwest Minnesota. Although most of these reservations were broken up only a few years after they were established, the Ojibwe never gave up lands around Red Lake. In 1918, the Red Lake band of Ojibwe adopted a constitution that was not changed until 1958 (MnSHPO n.d.).

Associated Property Types

Early examples of Post-Contact property types - dugouts and birch bark canoes - are not expected to be common because of the nature of their construction. However, 19th or early 20th century examples of canoes or fishing boats might be expected to be found in lakes and rivers associated with Dakota communities or Ojibwe reservations – in particular, those areas that have been long held, such as the Ojibwe reservation at Red Lake. Portages, wild rice beds, rapids, and water body margins adjacent to major villages have the highest potentials to contain the remains of these vessels.

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ST. CROIX TRIANGLE LUMBERING (1830s TO 1900s)

Geographical Limits: All rivers, creeks, and lakes east of and including the Mississippi River and south of the mouth of the Crow Wing River

The fur trade was already in decline in 1837 when the first major land-ceding treaties, negotiated with the Ojibwe and Dakota, opened much of east central Minnesota to St. Croix Triangle Lumbering (MnSHPO n.d.). Yankee entrepreneurs, many of whom had honed their skills in the forests of New England, moved into the St. Croix Valley. There, they developed a rhythmic lumbering enterprise based on the harvesting of pine during the winter and the transportation of logs or sawn lumber downstream in the spring. Several mills and mill towns, such as Marine, Stillwater, Anoka, and Taylor's Falls, sprang up. Consequently, the growing immigration and employment fueled an increase in river activity (Dunn 1966). Lumber was shipped to local markets as well as down river to Iowa, Illinois, and Missouri. After 1867 railroads were developed throughout the region as a result the production of timber increased along with the population. As populations increased and the demand for supplies and services grew, much of the cut-over lands left by logging companies were converted to farms.

Associated Property Types

The first regular lumbering outfit on the St. Croix River arrived in 1837 by mackinaw boat. The first steamer up the river was the *Palmyra*. Chartered for the occasion, in 1838, she carried sawmill machinery, men, and supplies to St. Croix Falls. Mills established there and at Marine sent the first rafts of lumber and logs downstream. Within five years, larger rafts of St. Croix logs were being floated to St. Louis (Durant 1905:648-49). Initially the rafts were managed with large oars and taken through lakes St. Croix and Pepin by means of sails or, in calm weather, by cordelling (men walking along the shoreline pulling the rafts with hand lines). Lake Pepin was dreaded by raftsmen; more than one raft was lost there during an attempted crossing. By 1851, steamboats were used for the first time in towing log rafts through those lakes, and, in 1863, a steamer was first used for the same purpose on the Mississippi below Lake Pepin (Durant 1910:663; Larson 1949:94). Log raft construction also improved, cutting assembly costs and creating larger rafts with less waste. The early towboats, raft boats, or log rafters used to move the rafts were typically stern-wheel steamers with powerful engines. Eventually, oars on the heads of rafts were replaced by stern-wheel driven bowboats (Durant 1905:663).

No shipwreck has yet been identified that can be tied directly to St. Croix Triangle Lumbering. However, it is clear that numerous vessel types from large powerful stern-wheel rafters and bowboats, to smaller tug and tow boats, and a wide variety of hand-, wind-, or horse-powered craft for more than 75 years were engaged in moving not only timber but people and cargo associated with the lumber business. Although it appears unlikely that larger unsalvaged shipwrecks or vessels have gone unreported along the well traveled St. Croix River, a wide variety of smaller wrecks or abandoned vessels can be expected in less traveled tributaries and lakes within the St. Croix Triangle Lumbering region.

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EARLY AGRICULTURE AND RIVER SETTLEMENT (1840 TO 1870)

Geographical Limits: All rivers, creeks, and lakes west of and including the Mississippi River below Little Falls, much of the Minnesota River and tributaries, and all of southeastern Minnesota

A broad combination of factors influenced development of agriculture in Minnesota. The first factor was the opening of the lands to development resulting from cessation treaties with the Dakota and Ojibwe in 1837. Later treaties with the Dakota in 1851 and 1855 also had similar effects. Following the treaties, settlers and large-scale timber operations moved into ceded areas and harvested the timber by clear-cutting of vast tracks of land. When Congress made Minnesota a territory in 1849, then passed the Preemption Act of 1854, settlers from the eastern states and Europe began moving to Minnesota in higher numbers to acquire the inexpensive yet fertile lands. When Minnesota was granted statehood in 1858, followed by the Homestead Act of 1862, settlers and speculators began pouring into the state. Most settlers and speculators came to Minnesota by steamboat. Their farms established along the St. Croix, Minnesota, and Mississippi rivers and their tributaries. Early agricultural endeavors were conducted by the family on a subsistence level. There were European immigrants as well as American born settlers.

Most people were drawn to Minnesota by promotions and advertisements by either individual entrepreneurs, railroad companies, or others who were motivated by economic, ethnic, and religious concerns. The earliest farming communities were those created by individual speculators, companies, and groups with a particular ethnic or social homogeneity. Towns were focused primarily along rivers as sources of transportation and water power. Many of the towns became centers for agricultural product processing facilities, such as flour mills and breweries. Usually, these were small operations that catered to a local market.

Associated Property Types

Regular steamboat packet service to St. Paul (Figure 3) began in 1847 and grew steadily thereafter (until the peak years of 1857 to 1858), bringing thousands of immigrants to the new settlement frontier (Blegen 1963:156; Holmes 1908:321-22; Gilman 1977:82). A treaty signed at Traverse des Sioux on the Minnesota River in 1851 channeled white immigration in that direction, leading to the establishment of the Sioux Agencies and Fort Ridgely in 1853. The rush of settlers along with the government's need to supply its outposts and provide annuities to the Indians promoted the growth of steamboat and barge traffic on the river. In the drought year 1854, most supplies were poled upstream in keeled barges ranging from 50 to 60 feet long and 10 to 12 feet wide. Another dry summer, in 1863, led to realization that it was easier, more predictable, and more expedient to transport freight up the Minnesota River in strings of barges drawn by small tugboats (Hughes 1905:137-39, 152).

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Early Agriculture and River Settlement continued:

Economic growth in the Minnesota River Valley was initially based largely on agriculture and associated river settlements with many new towns relying on the river for transportation and water power, and on farmers for agricultural products. Literally dozens of steamers (including packets) and numerous other shallow draught, small capacity vessels frequented the river until 1871 when railroads reached the towns of Mankato and New Ulm, consequently crushing their business (Hughes 1905:156-57; Gilman 1977:102). Ferryboats made their appearance on the Minnesota River in 1839 at Mendota; others followed, often staying in business until they were replaced by bridges. The first ferry in Minnesota was likely one that connected Fort Snelling with a road on the east bank of the Mississippi (Roberts et al. 1993:54-55). In the days before the proliferation of improved roads and bridges, ferries were known on waterways throughout the state. Over time, the ferry operations ranged from simple canoe-ferries (e.g., Morris 1976:12) to larger wooden flats.

As agriculture continued to gain momentum in Minnesota, subsistence level farmers began to produce an ever increasing surplus of wheat. Grain became a major export commodity for river vessels by the 1860s. Barge traffic increased in response to increased grain production. Tugboats might push eight or more grain-filled barges at one time. In 1866, there were 180 barges operating out of St. Paul (Hunter 1949:574).

Thus far, no shipwreck or abandoned vessel that is firmly linked to the Early Agriculture and River Settlement context has been identified. However, there are at least 25 accounts of steamboats and barges wrecking or burning during that period in the southern Minnesota rivers. Additionally, early examples of small fishing boats, canoes, flats, etc. might be expected to be found in lakes associated with early agricultural centers.

RAILROADS AND AGRICULTURAL DEVELOPMENT (1870 TO 1940)

Geographical Limits: All the rivers, creeks, and lakes in the southern half and western quarter of Minnesota

After 1870, farming began to reach production levels that enabled an ever increasing surplus of products. Large-scale production, initially of wheat then later a variety of products, helped to shift the average Minnesota farmer from a subsistence level operation to a diversified family operated business. A network of railroads was a key feature in the area's development. New towns developed along rail lines to serve as centralized shipping points and to serve as supply centers for products and services. To the residents of sparsely populated agricultural areas, the new communities provided a central location for social and economic activities. Grange halls, township halls, rural schools and farmers clubs became popular gathering places for social functions and political meetings (MnSHPO n.d.).

Access to rail lines promoted population growth. New farm developments were promoted by efforts of individuals, entrepreneurs, railroad companies, and others who were motivated by ethnic or religious concerns. Agricultural based industry developed all main rail arteries. The important flour milling district at St. Anthony Falls in Minneapolis and the meat packing operations centered in South St. Paul are primary examples. In the 20th century, increased access to rail lines as well as regional markets were provided by improved roadways and trucking (MnSHPO n.d.).

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Railroads and Agricultural Development continued:

Associated Property Types

The arrival of the railroad signaled a shift in the need for waterborne transportation, particularly in southeastern Minnesota. Large agricultural communities like Mankato and New Ulm that had developed on the Minnesota River lost almost all their steamboat traffic after they were connected by railroads in 1871 (Hughes 1905:156-57; Gilman 1977:102). However, in many locations, the need to transport products by river from outlying farms and communities to railheads and markets continued well into the 20th century. The growing economy brought new settlers; thousands continued to travel throughout Minnesota by packet and tramp steamers

Thus far, no wrecks have been located that can potentially be associated with the Railroads and Agricultural Development context. However, there are at least 18 accounts of steamboats and barges wrecking or burning during that period in the Mississippi, St. Croix, and Red rivers. Additionally, early examples of small fishing boats, canoes, flats, etc. might be expected to be found in lakes or rivers associated with early agricultural centers.

NORTHERN MINNESOTA LUMBERING (1870 TO 1930s)

Geographical Limits: North central and northeastern Minnesota

Northern Minnesota Lumbering had its tentative beginnings in 1848 to 1849 when logs cut that winter on the Mississippi (above Little Falls) were floated down to a new commercial sawmill at St. Anthony Falls. However, the rapid increase in Northern Minnesota lumbering (outside the St. Croix triangle) began after 1870. In the 1860s, several factors brought about an increase in market demands for construction lumber. The most influential of these factors was the Homestead Act of 1862. By terms of the Homestead Act, 160 acres of public land were given (after a payment of a ten-dollar fee) to every adult who chose to emigrate to the Plains territories and beyond. The result, on the heels of the Civil War, was a great migration West. In three decades between 1870 and 1900, Americans occupied more new areas of the continent than they had in three centuries. The expansion of the railroad into the Great Plains region in the 1860s played a key role in opening the vast new markets to Minnesota lumber. With expanding markets, capital investments in lumbering increased. At the same time, logging and milling equipment became more mechanized, helping to increase productivity. By the turn of the century, Minnesota's lumber industry was at its peak. Minnesota had become the third largest lumber producing state in the nation and contained three of the largest sawmills in the country (MnSHPO n.d.).

Between 1870 and 1890, Northern Minnesota timber was harvested in close proximity of the major rivers and their tributaries. Logs were cut in winter, assembled along shorelines and staging areas to be rafted and floated downstream to mills the following spring. Timberlands along the major transportation arteries such as the Mississippi, St. Louis, Big Fork, and Rainy rivers were cut first. By the 1890s, a network of railroads had been developed by commercial rail lines through large portions of the State.

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Northern Minnesota Lumbering continued:

Additionally, large logging and lumber companies built their own local and regional rail systems. Previously inaccessible timberlands were opened and sawmills were constructed closer to the timber supply. As a result, transportation of logs by river declined. By 1910, the logging railroad had become the primary method of log transportation (MnSHPO n.d.).

After the turn of the century, lumber production began to wane. In the 1920s with the almost total depletion of white pine, the lumber industry fell off sharply and major sawmills began to close. In response, several lumber companies established conversion plants to utilize the state's vast supply of "inferior trees." By the mid-1920s, the wood conversion industries (primarily paper manufacturing) had surpassed the lumber industry in value of product. With the closing of the last major sawmills in the early 1930s, a significant and colorful era in Minnesota history had come to an end (MnSHPO n.d.).

Associated Property Types

The spread of Northern Minnesota lumbering spawned a new era of water transportation in the northern and northeastern regions of the State. Literally hundreds of vessels were engaged directly or in support of the logging industry. Powerful stern-wheelers served as rafters and bowboats on major logging arteries. Packets, tramp streamers, tug boats, and steam scows representing all regional types worked and operated on rivers and lakes directly or indirectly for the northern lumber business. In 1870, the Northern Pacific Railroad reached the Mississippi where the town of Aitkin now stands and also crossed the Mississippi north of Crow Wing. This signaled the end of the once thriving frontier community of Crow Wing and gave rise to the new city of Brainerd. Both Aitkin and Brainerd quickly became supply centers for local logging operations. Aitkin, in particular, transshipped many supplies up the Mississippi on steamboats with carrying capacities ranging from 30 to 100 tons each (Hart 1952:8). Hundreds of men also passed through these towns each year to work in the northern camps. Some of the resulting wood products were shipped by rail to feed burgeoning railroad and agricultural developments in relatively timber-free areas of western and southern Minnesota.

The demand for timber led to the creation of a rather interesting array of vessels – many often jerry-rigged for very specific and often quite short-lived purposes. A primary concern of loggers was the transportation of trees or logs from the place of cutting to some usually distant mill site. To facilitate their operations and supply their camps, they used a variety of rowing vessels such as bateaux and sacking boats, and barges. Log drives were accompanied down rivers by wanigans or wanigan rafts – simple craft that provided platforms for cook shacks or bunk houses. Log booms or rafts were often towed across slack or open water with headworks run by human or horse power, or by more sophisticated steam vessels like alligators, slough hogs, or towboats. Though often of common purpose, some of these vessels were seemingly one-of-a-kind in appearance. A good example is the *Swan* – the "ugly" side-wheel raft used to pull log booms on Lake George (Vandersluis 1974:326). Another is the *Shadow* – an open-decked side-wheel barge or scow, lacking even side rails – which ran on Bemidji and Little Turtle lakes (Vandersluis 1974:176d). The

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Northern Minnesota Lumbering continued:

latter craft may share affinities with an alligator, perhaps called *Bull-of-the-Woods*, used on Burntside Lake near Ely, Minnesota, before apparently being scuttled on Hoist Bay (Stenlund 1986:22).

Despite the aberrant vessel types, written and photographic evidence shows that many smart-looking, traditional, stern- and side-wheel steamboats served the needs of loggers, settlers, suppliers, and entrepreneurs on many Northern Minnesota waterways. These waterways include Cross and Pokegama lakes on the Snake River, the Red River of the North, Red Lake and Red Lake River, Rainy Lake and River, Lake-of-the-Woods, and Vermilion, Cass, Winnibigoshish, Leech, Sandy, Gull, and Mille Lacs lakes. Government steamers ran on Leech Lake (Dally 1931:85), Red Lake, and on the Mississippi between Aitkin and Grand Rapids (Vandersluis 1974:85, 179).

Steamboats were often built on the waterways where they operated. For example, the steamer *Zelah May*, which saw service on Wolf, Andrusia, and Cass lakes, was reportedly built on the south shore of Wolf Lake (Vandersluis 1974:288). The *Mudhen*, a steamer operated on Red Lake and Red Lake River, was said to be built at the mouth of Sandy River on the southwest corner of lower Red Lake with oak milled at the town of Buena Vista (Vandersluis 1974:176). *Leila D*, the first individually owned steamer on Leech Lake, was built at the "shipyard" at the west end of the town of Walker, Minnesota (Dally 1931:75), with wood cut at Eagle Bend in Todd County (Vandersluis 1974:155). Steamboats also were built at Gull Lake (Anonymous 1895), Brainerd, Sauk Rapids (Hart 1952:10), St. Anthony (Holmes 1908:322), around Mille Lacs (Joe Fellegly, personal communication), on Red River at Georgetown, Breckenridge, Grand Forks, Fargo, Moorhead, and McCauleyville (Bill Papers, Box 11. Vol. 48:231). In addition, they were constructed at several towns on Lake Minnetonka (Edgar 1933; Meyer 1980), at Stillwater, Franconia, Osceola, Prescott, Taylor's Falls, Arcola, and Lakeland in the St. Croix Valley (Buck 1990:43-54), and on other lakes and rivers in Minnesota.

Boats that were unwieldy, damaged, worn out, or which proved to be too large or too small for their intended use might be remodeled or reconfigured. Several vessels operating on the Mississippi between Brainerd and Grand Rapids, for example, were rebuilt to meet the requirements of navigation in the narrow, winding channel of that river (e.g., Hart 1952:11, 12, 17).

Steamboats were occasionally shipped over land to their intended place of use, or they were shipped from one lake or drainage to meet demands elsewhere. Quite often, overland shipment required the disassembly and reconstruction of the vessel. A classic example, aforementioned, is the steamer *North Star* which was dismantled near Crow Wing and transferred in pieces to the Red River where it was reborn (Figure 4) as the *Anson Northrup* (Hart 1952:9). A similar endeavor occurred in 1878 when the steamer *White Swan*, after proving to be unsuitable for navigation on the Mississippi, was disassembled and shipped to the Red River for reconstruction and service there (Hart 1952:11). One of the most convoluted journeys by a vessel is likely that of the 30-foot steam launch *Remnica* which was plagued by its deep draught. The *Remnica* was originally sent by rail to Aitkin in 1903, but it proved unsuitable for safe operation on the shallow Mississippi. Consequently, in 1904, she was sold to a logging company and transported to Mille Lacs

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Northern Minnesota Lumbering continued:

with much the same result. From there, she was transferred to International Falls for use on Rainy River (Hart 1952:16-17).

Thus far only four wrecks that can be associated with a Northern Minnesota Lumbering context have been located:

City of Aitkin

The *City of Aitkin* is a steamer 120 feet long by 22 feet across the beam and built in 1878 by George Houghton. She ran between Aitkin and Pokegama Falls carrying freight and passengers. In 1883, she carried supplies for the government dam above Pokegama Lake. [REDACTED] in 1883 due to falling water that caused it to list [REDACTED]. One informant reports that vessel remains still exist at the reported location (Rosnau, personal communication 20 July 1996). However, another source states that she was raised and rebuilt after the season but that later parts of her were used in building the *George H. Houghton*, launched in 1886.

Andy Gibson

The *Andy Gibson* was a wooden hull stern-wheel packet built in 1884 by Lowell, West and Boness. She was 100 feet long and 32 feet across the beam and designed to carry 100 tons of freight. She was later lengthened by 10 feet, making her the "largest boat ever to operate on this stretch of the river [Aitkin to Grand Rapids]" (Hart 1952:13). In 1886, the boat was chartered for excursions but also carried freight and passengers on her regular runs. In 1889, she supplied the Duluth and Winnipeg Railroad, then under construction. She was purchased in 1891 by the Potter Co. for logging and government service as a snag boat (Hart 1952:14; Vandersluis 1974:125).

In 1892, the *Andy Gibson* was retired from service. One source recalls that her boiler was used in the Potter store (Hart 1952:14), while another reports that the boiler was used in the Willard Hotel at Aitkin (Rosnau, personal communication 20 July 1996). In 1906, castings and other machinery were used in a logging boat then under construction at Lake Winnibogoshish (Hart 1952:14). Possibly, some machinery went to the *Franklin S. Lane*, a steamer built at Ball Club, Minnesota (Vandersluis 1974:290n). Today, the *Andy Gibson* reportedly [REDACTED]

[REDACTED] (Rosnau, personal communication 20 July 1996).

Swan

The *Swan*, owned by J.M. Markham and captained by William Hay, appeared in 1894 carrying passengers and freight in the Aitkin vicinity (Hart 1952:12). The following year, she began carrying supplies to the government dam under construction at Sandy Lake. In 1896, the vessel was sold to Arthur Polley, and she was thereafter engaged in logging until 1898. In 1898, S.H. Hodgedon sold her to George Maxfield and Thomas Nephew. [REDACTED]

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Northern Minnesota Lumbering continued:

1952:14-15). It is at this location that the charred remains of a vessel were sighted during low water in 1968 (Rosnau, personal communication 20 July 1996; ACRG 1977:33, map).

Bull-of-the-Woods

The *Bull-of-the-Woods* was a type of scow locally known as a "gator". [REDACTED]
[REDACTED]. The vessel represents a type of steam-powered scow developed by the logging industry for use around Northern Minnesota lakes. It was likely that the vessel was used to pull log rafts to the mouth of Burntside River where they then were sent into Shagawa Lake. This was accomplished by attaching a cable to a log boom, proceeding across the lake while paying out slack cable, then anchoring the scow and winching the boom forward. Investigators have found approximately one-half mile of cable on this wreck (Stenlund 1993:22). The scow was 50 feet long by 14 feet across the beam. The vessel was powered by two paddle wheels (11 feet in diameter) that turned independently of each other to provide steering capability, while the steam boiler was powered by coal.

Research has identified more than 30 accounts of potential steamboat wrecks on the Mississippi, St. Croix, Minnesota, and Rainy rivers as well as several northern lakes that might be associated with the Northern Minnesota Lumber context.

MINNESOTA TOURISM AND RECREATION IN THE LAKE REGIONS (1870 TO 1945)

Geographical Limits: All of Minnesota

Minnesota's tourism and resort industry had its beginnings in the 1870s with the development of a railroad network that connected the outlying areas of the state to population centers. Even before the expansion of the railroads, residents of Minneapolis and St. Paul were taking excursions to the Lake Minnetonka area. However, after the development of passenger rail services even outlying lake areas in southwestern, central, and northern Minnesota attracted visitors. Primarily, visitors came for the scenery and traditional outdoor sports including hunting, fishing, and canoeing (MnSHPO n.d.). In the larger lakes such as Mille Lacs and Minnetonka, numerous excursion boats were built to take passengers sightseeing and fishing. During a 30-year period, Lake Minnetonka had more than 90 excursion boats operating on the lake (Figure 5). Many could carry hundreds of passengers. River excursion boats from Minneapolis and St. Paul also were popular.

The automobile and improved roads along with increased leisure time brought a rapid expansion in the resort industry after World War I. During that same period, tourism also was promoted heavily by organizations such as the Minnesota Scenic Highway Association, Ten Thousand Lakes Association, Arrowhead Association, and Northern Minnesota Development Association. The state government also began taking a hand in promoting tourism by the

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Minnesota Tourism and Recreation in the Lake Regions continued:

expansion of Minnesota's state parks and state forest system during the 1930s by providing additional facilities and attractions for vacationers (MnSHPO n.d.). Seasonal residents and tourists frequently came to Minnesota's lake regions from Southern and Midwestern states as well as from the urban centers of Minnesota for relief from stifling summer heat. Others came year around, attracted by opportunities for outdoor sports (MnSHPO n.d.).

Associated Property Types

The roots of Minnesota tourism had its beginnings in 1835 when the steamer *Warrior* arrived at Fort Snelling carrying the usual supplies plus the first group of sightseeing passengers who were embarking on what became known as a "Fashionable Tour" of the Northwest (Holmes 1908:319-20). Soon visitors from as far away as New Orleans, St. Louis, and Pittsburgh traveled to Minnesota to promote their health, out of an interest in the natural world and Indian cultures, or simply to escape the heat of southern summers (Blegen 1963:10, 118-20, 156).

From the beginning, the growth of Minnesota's tourism/resort industry was linked to mechanized transportation systems such as steamboating. Seemingly, every place that packet or tramp steamers were in operation, there was at some time or other a use of those vessels for celebrations or outings. In the 1890s, a Mississippi River excursion was an annual event for teachers attending an institute at Aitkin (Hart 1952:14). A three-day celebration to mark the launching of the *Lotta Lee* on the Shell River in Hubbard County included excursions, live music, speeches, and a race pitting the steamer against Indians in canoes (Crandall 1984:90). Excursions and pleasure boating also were popular on inland lakes such as Leech (Dally 1931:76), Mille Lacs (Joe Felleggy, personal communication), Minnetonka (Provost 1996), and many others. The *Ida*, a double-decked steamer capable of carrying 200 passengers, operated on Lake Bemidji (Vanderluis 1974:239). Minnesota's greatest maritime disaster – the loss of 98 lives caused by the capsizing of the *Sea Wing* – occurred in July of 1890 during a Sunday excursion on Lake Pepin (Johnson 1990). Pleasure barges too were outfitted to accommodate excursionists on day-trips or special events (e.g., Buck 1990:18, 26, 132, 140); showboats (floating theaters) and circus boats, also pushed by steamers, appeared on the Mississippi River as far north as St. Paul between 1855 and 1915 (Anonymous 1977:6-7).

The demand for water transportation and activities spawned a wide range of recreational water craft like fishing launches, row boats, speed boats, sailboats, and house boats. Boat builders in towns like Little Falls worked hard to meet the demand. Even today, tourists and excursionists by the thousands flock to Minnesota's Boundary Waters Canoe Area Wilderness to experience the outdoors in a canoe, much as the American Indians and fur traders did in Minnesota in the years before intensive white settlement. Others who yearn to relive the steamboat days on the Mississippi can take a local ride on the replica *Jonathon Paddleford* in the Twin Cities, or can catch a larger vessel like the *Delta Queen* on a run to downriver ports.

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Minnesota Tourism and Recreation in the Lake Regions continued:

At least five wrecks have been identified that can be directly linked to Minnesota Tourism and Recreation in the Lakes Regions context. All the vessels have been discovered [REDACTED] Three of these vessels are sisterships built in the same year:

White Bear, Hopkins and Como

These vessels were steam launches, referred to locally as "express" boats or "streetcar" boats, built in 1906 by the Twin City Rapid Transit Company (Foster, personal communication 13 July 1996; Provost 1996:7). The streetcar boats were constructed in Minneapolis and designed by Roy Moore as a propeller-powered vessel with a hull of cypress planking over white oak ribs, measuring 70 feet long by 14 feet 10 inches abeam (Edgar 1933:55; Provost 1996:8). The vessels had a "torpedo" stern, electric lights, a capacity for 130 passengers, and (originally) a yellow paint job (Jones 1969:388).

Six sister vessels, the *Hopkins*, *Como*, *White Bear*, *Stillwater*, *Harriet*, and *Minnehaha*, originally carried passengers from various points around the lake to the Excelsior docks from which ferries shuttled riders to an amusement park on Big Island (Edgar 1933:55). The park closed in 1911, and the streetcar boats were [REDACTED] until only the *Hopkins* remained (Mugford 1993). She was purchased by George Hopkins and Joseph DeGuise in 1928. The new owners painted her white, renamed her *Minnetonka* (III), and "used [her] for charter service for the next twenty years" (Meyer 1982:91). Harley Pry purchased the vessel by 1940 when she ended her career as a steamer (Meyer 1982:107). A diesel engine was installed, and the vessel operated at least until 1947 (Provost 1996:38; Meyer 1982:91). The *Minnehaha* was raised in 1980 and restored to working order in the mid-1990s.

Two other vessels identified in [REDACTED] include:

Stern-wheel steamer (name unknown)

An unidentified stern-wheel steamer [REDACTED]

A local diver believes that this could be the *Excelsior* (Provost 1996:73, 87). The *Excelsior* was launched in 1901 as the *George*. Originally 125 feet long, she was rebuilt before 1906, named *Excelsior*, and added to the Minneapolis and St. Paul Street Railway fleet. The *Excelsior* was burned intentionally during the summer of 1910 as a spectacle for tourists (Edgar 1933:52-53). The remains of this wreck are 100 feet long by 20 feet abeam and "burned to the waterline but the deck and hull below the waterline is intact" (Wheeler 1993:1).

Side-wheel vessel (name unknown)

An unidentified 139-foot-long, side-wheel vessel [REDACTED]

[REDACTED] (Provost 1996:89). A local diver believes that this wreck could be the side-wheel ferry *Minneapolis* (II) that was burned, on 8 August 1912, as a spectacle for tourists (Provost 1996:73; Edgar 1933:56).

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Minnesota Tourism and Recreation in the Lake Regions continued:

Research has identified more than 19 accounts of wrecks or abandoned vessel types, [REDACTED] that could be directly associated with the Minnesota Tourism and Recreation in the Lakes Regions context. The potential for additional unreported wrecks or abandoned vessels in other historically popular lakes in Minnesota would appear to be high.

URBAN CENTERS (1870 TO 1940)

Geographical Limits: Minneapolis, St. Paul, Duluth and – depending on the definition and period – Rochester, St. Cloud, Mankato, Winona, Moorhead, and Stillwater

The Urban Center context has been given the functional definition of: “a nexus of economic and political activity that acts as a significant magnet for a widespread hinterland.” Urban centers are characterized by “dynamic movements between residence and workplace, between work and leisure...” Additionally, the Urban Center context can be subdivided into two tiers in Minnesota – “the Twin Cities of Minneapolis and St. Paul and the Lake Superior port of Duluth, exist in a regional, even nationwide context of commerce, government, shipping, and transportation.” Smaller urban centers like Rochester, St. Cloud, and Mankato are mostly intrastate in scope. Although they technically qualify under the definition of an urban center, they may associate more readily to another context (MnSHPO n.d.).

Intensive white settlement of Minnesota began in the southeastern part of the state in the mid-1800s and spread north and west. Settlement was first focused on rivers. St. Paul, Red Wing, and Winona became port cities for the shipment of people and goods and agricultural products out of the State. Minneapolis, Stillwater, and Rochester were located with respect to water power where wheat could be ground into flour or logs sawed into lumber. Duluth was settled in the 1850s as the head of navigation for Lake Superior.

As white settlement spread north and west fostered by railroad expansion in the 1870s, regional centers were established, such as Mankato in south-central Minnesota, St. Cloud in west-central Minnesota, and Moorhead in northwestern Minnesota. While these regional centers were built on rivers, they were never considered major ports due to shallow channel depths. Attendant to transcontinental and transregional rail systems, some cities developed rail-based internal transit systems. Such systems were present by the late 19th century in Minneapolis, St. Paul, and Duluth, although all have now disappeared. Rail systems significantly decreased the need for large commercial steamboats.

By the end of the 19th century, the Minneapolis-St. Paul metropolitan area was firmly established as the primary urban center of Minnesota. The Army Corps of Engineers had established a 4.5-foot channel that was maintained by dredging in the Mississippi River as far north as St. Paul. This was extended to Minneapolis in 1890, and Minneapolis finally became a significant river port with the completion of Lock and Dam #1 in 1917. Other lock and

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Urban Centers continued:

dams were completed on the Mississippi south of St. Paul in the 1930s, and the channel depth was maintained at 9 feet. Currently, the Corps of Engineers maintains 9-foot navigation channels on the Mississippi as far as northern Minneapolis, on the Minnesota River as far as Shakopee, and on the St. Croix River as far as Stillwater. The principal commodities shipped by water are bulk cargoes of grain, coal, aggregates, and petroleum products.

Associated Property Types

Several steam passenger service lines and excursion boats operated from St. Paul well into the 20th century. Many steamboats worked in a variety of services. An example is the *Sea Wing* which was built as a rafter for the lumber trade but capsized in 1890 on Lake Pepin killing 98 people during an excursion from St. Paul on the Mississippi River.

One of the most interesting of property types to be associated with the Urban Center context is the "express" boat. Examples include the *Minnehaha*, *Como*, *Stillwater*, *White Bear*, *Harriet*, and *Hopkins* which were built in Minneapolis by the Twin City Rapid Transit Company in 1906 (also identified under the Minnesota Tourism and Recreation in the Lakes Regions context). These vessels were built as a water extension of the street car line and brought passengers to the Lake Minnetonka area from Minneapolis and St. Paul. Since they were built by the transit company, their superstructures had many of the same characteristics of a street car. In fact, they were even painted with the same color scheme. [REDACTED] The *Hopkins* was sold and continued to operate on the lake until 1949 when it was also sunk.

The remains of three of these vessels – the *Como*, *White Bear*, and *Hopkins* – [REDACTED] The *Minnehaha* was raised in 1980 and restored between 1990 and 1996; it now operates as an excursion boat on the Lake (see Minnesota Tourism and Recreation in the Lakes Regions Associated Property Types). The tug *Hercules* may be associated with an Urban Center context because of its relationship with the St. Paul Street Railway Company:

Hercules

Owned by the Minneapolis and St. Paul Street Railway Company, the *Hercules* was a 50-foot, "flat bottomed propeller" tug built at Excelsior in 1917. Her engines came from the *Mayflower* (Edgar 1933:56). The tug was dismantled in 1926 and [REDACTED] (Edgar 1933:57; Provost 1996:85). A local diver claims that the vessel was stripped before it sank and that only a hull now remains (Crawford 1993; Wheeler 1993:4).

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Section F Page 1 Shipwrecks of Minnesota's Inland Lakes and Rivers

F. ASSOCIATED PROPERTY TYPES

Introduction

There is potential for a wide variety of vessel types to be found in Minnesota's Inland Waters. They are not easily divided into any sort of classification system that is readily associated to historic contexts or even some chronology. For presentation purposes, they have been divided here into two groups based on how they are powered:

Group I: wind-, water-, hand-, or horse-powered vessels

Group II: fuel-powered vessels

Group I vessel types are moved, maneuvered, or powered through the water to a destination by being sailed; drifting on water currents; paddled, oared, cranked or pulled by hand, or paddled or pulled by using the power of a horse (or other beast of burden). Group II is any vessel that is powered by an engine or motor that burns or otherwise consumes any type of fuel including wood, coal, oil, diesel, kerosene, or gasoline (and including steam and electricity).

Only vessel types from Group I are used before the Age of Steam. Following the introduction of steamboats, both Groups I and II are found to be associated with all historic contexts generally beginning in the Post-Contact Period (1837-1945).

GROUP I – WIND-, WATER-, HAND-, OR HORSE-POWERED VESSELS

Bark Canoes

Narrow, light, shallow-draft bark boats moved with paddles. Canoes were developed by North American Indians and later adopted and modified by Euro-Americans for use in trade, exploration, travel, and, most recently, recreation. Paddlers and passengers usually faced in the direction of travel. Larger canoes were run with specialized crews; in some cases, on big water, they were equipped with make-shift oarlocks to facilitate rowing. Canoe sails, some as simple as holding up a blanket or mat, were also used (McDermott 1941; Nute 1944:113-15; Morse 1969:20-21; Adney & Chapelle 1964:145; Bass 1972:284).

- Two-man *canot allège*, or Indian canoe, 8-10 feet in length.
- Express or Light canoe, ranging from 18 to 21 feet; used for rapid travel.
- North canoe: A 4- to 8-man *canot du nord*; sometimes used as an express canoe.
- Bâtard or Bastard canoe: A 10-man canoe that was neither North or Montreal.
- Montreal canoe: An 8- to 12-man or even 14-man *canot maître* or *canot du maître*.

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Group I continued:

Wood Canoes

Other than simple floating rafts, wooden dugout canoes may have been the earliest form of water craft in Minnesota. They have likely enjoyed the longest use, and they were still around during Post-Contact times (McDermott 1941:118-19; Bass 1988:14-18, 114).

- Pirogues or dugouts and variants: Vessels fashioned from hollowed tree trunks. A variation of the *pirogue* was a dugout split in half longitudinally and then reassembled with planks inserted between the halves (e.g., Hoagland 1911:111-12).
- Strip canoes and variants: Modern types like Rushtons, etc.

Skin Boats

Uncommon in Minnesota (Adney & Chapelle 1964:219-20; Bass 1988:14).

- Skin-covered frame canoes: Used only as a temporary emergency vessel.
- Bullboats: Bowl-shaped; used on streams in crossing from one side to the other.

Felucca or longboat

A poorly-known vessel type said to be long and narrow; it moved by sailing with lateen sails or by rowing. Hull construction is uncertain. A felucca was used by the French trader-explorer Pierre Charles Le Sueur during his expedition to the Blue Earth River in southern Minnesota in 1700 (Wedel 1974:162).

Bateau or Bateaux

A variety of keelless, often flat-bottomed, plank boats made with pointed ends and straight flaring sides. High, pointed ends were also common, and some had rounded sides, lapstrake planking, and endposts, "knees", or other framing elements. Bateaux were typically propelled by rowing, poling, and water currents, or they were sailed with the wind. Smaller bateaux were sometimes called "the white man's version of the canoe," though they were more durable and difficult to portage (Adney & Chapelle 1964:13; Nute 1944:115-16; Bass 1972:285; 1988:130-38; Vandersluis 1974:187; Newman 1985:283).

- Bateau plat or Chaland: A smaller bateau of light draft and narrow beam (McDermott 1941:20, 46).
- Mackinaw or Albany Boats: Generally larger boats equipped with sails, oars, or tiller. This was a noted American Fur Company vessel used on Lake Superior and the St. Louis River upstream to Fond du Lac and on the Mississippi and Minnesota rivers in Southern Minnesota (e.g., Hughes 1905:132).
- York Boats: Said to be descended from the bateau, but made for portaging (rolling over logs laid on portage trails). This was a noted Hudson's Bay Company vessel used on Red River.
- Sacking Boats: Large, narrow, flat-bottomed bateau-like boat used in logging operations to facilitate the movement of log booms across open water. Primarily used to transport men or, in conjunction with headworks, to move anchors and tend anchor ropes (Ryan 1976, II:30-32). (See Rafts, Headworks, below.).

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Group I continued:

Keelboats

A keelboat is a craft of plank construction with interior frames built over a keel. Typically equipped with masts, sails, rudders, and large oars, or moved upstream by poling or, early on, by steamboats (Petersen 1967:51-52, 169, 222-224; McDermott 1941:23; Jensen 1992:66-70).

- Ordinary keels: Generally of 40- to 80-foot length and 7- to 10-foot beam.
- Barge (Berge): A somewhat wider and flatter variant; a good shallow-water craft.

Flatboats

Strong, box-like boats with flat bottoms, perpendicular sides, and upturned ends. They sometimes were covered throughout their entire length. They were constructed to float with the current and steered by large oars or sweeps placed at the ends. Most flatboats never returned after descending the river; often, they were dismantled and used or sold for lumber at their downstream destination (Gould 1889:75; Petersen 1967:50-53; Jensen 1992:67-69; Vandersluis 1974:186-87, 294c).

- Private flatboats: Used to transport people and their belongings, commodities, or produce to downstream markets, mills, or settlement opportunities.
- Excursion or Pleasure barges: Flatboat barges, some outfitted with canopies, deck furniture and other features needed for accommodating excursionists on day trips or for special events. Such vessels were pushed by steamboats (e.g., Buck 1990:18, 26, 132, 140). Showboats (floating theaters) and circus boats, of unknown hull design but pushed by steamers, appeared sporadically on the Mississippi River as far north as St. Paul between 1855 and 1915 (Anonymous 1977:6-7).
- Wanigan: A sort of houseboat typically used during log drives as a cook shanty, bunkhouse, supply boat, or as a place for rivermen to dry their clothes. Scow or hull construction varied with the demands of local waterways. Many had hulls of hewn lumber. Those used in perilous waters might be reinforced with hewn "knees" or frames. Some wanigans were returned upstream by horses pulling along the riverbanks, while others were dismantled and the parts hauled upstream by sled or rail for re-assembly. Still others became floating bunkhouses near mills, were sold for use further downstream, or were placed on shore and used for sheds or cabins (Ryan 1980, III:7-9). (See Wanigan rafts, below.)
- Clamming boats: Narrow, open flatboats outfitted with racks from which to hang the clam bars or pipes used to catch clams. Some clamming boats moved downstream with the aid of a crude submerged sail or "mule". Clamming boats were common on the Vermilion, Cannon, and Mississippi rivers in the late 1800s (Angell 1977:202-03).

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Group I continued:

Rafts

Rafts are any of a variety of floating platforms serving as transport or utility craft or as vehicles for conveying their material parts (Larson 1949:91-93; Jensen 1992:68; Bass 1988:19).

- Simple floaters: Small crafted or improvised platforms of logs, reeds, barrels, etc. Examples are temporary or emergency craft used to cross or follow streams and recreational rafts anchored for swimming.
- Wanigan rafts: Simple, decked rafts used as and like wanigans but occupied by tents rather than more elaborate wooden houses (Ryan 1980, III:7-9). (See Wanigan, above.)
- Headworks: A decked raft with a capstan, rope, and anchor used to winch log booms across lakes. Some capstans were turned by men, others by horses or steam engines. Headworks usually were built on the lake where they were used. They might see many years of service before being abandoned (Ryan 1976, II:30-32; Birk 1996a).
- Log or lumber rafts: Secured platforms of logs or lumber originally propelled by water currents and controlled by long sweeps. At Lake Pepin, some rafts were moved with crude sails or by cordelling. Rafts were later moved by steamboats. The rafts provided means to transport their component parts to markets, mills, etc.

Ferries

These vessels were used to shuttle people, goods, and other cargo across narrow bodies of water, such as rivers or streams. There was a simple canoe ferry in operation at Mendota in Minnesota's pre-territorial days (Morris 1976:12). Larger, more traditional ferries had open main decks that allowed patrons or vehicles to board on one side and leave from the other. Most of Minnesota's ferries were probably simple, wooden flatboats with aprons on either end and with siderails on the deck. According to a study of ferries on the Lower Minnesota River Valley, the ferry boats there were "usually home made affairs capable of carrying across the river up to two cars or wagons at most" (Roberts et al. 1993:66). The ferries often were guided to and fro by a rope or cable, and were originally propelled by the currents or by human or animal power (Bass 1988:203; Buck 1990:34-35; Roberts et al. 1993:55-56; Larson 1994:68). One of the last current-driven ferries (i.e., a swing ferry) to operate in Minnesota and on the Mississippi River was at the Clearwater crossing in central Minnesota which closed in 1952 (Waterman 1994).

Pontoon Bridges or Wharves

Pontoon bridges or wharves are any of a class of floating structures attached or connected in some manner to one or more shorelines or riverbanks, and on or over which people, cargoes, or vehicles could move. A 1500-foot pontoon bridge constructed across the St. Croix River at Stillwater in 1876 went out of service in about 1931 (Roberts and Fried 1985:115-17).

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Group I continued:

Rowboats

Rowboats are any of a class of small, multi-use vessels that might be propelled by oars. They usually have built-in seats. Later models might have square sterns with transoms of sufficient strength to admit the use of gasoline-powered outboard motors. Rowboats are now common family craft and are kept by many Minnesota resorts to accommodate fishing and recreational activities. Rowboats also find use as auxiliary or emergency craft on larger vessels. Originally built of wood, modern examples are usually of fiberglass or aluminum.

Miscellaneous Vessels

These vessels include various types of sailboats, sculls, pontoons, kayaks, glass-bottomed boats, ice boats, ice yachts, or other miscellaneous water craft not listed above.

GROUP II – FUEL-POWERED VESSELS

Packets

General service vessels that travel regular routes moving passengers, freight, and mail (Figure 6). Minnesota packets typically were stern- or side-wheel steamboats and ranged from large floating palaces making extended runs to lesser "tubs" keeping local schedules. The better packets served food and liquor, had staterooms and sleeping cabins, and often, live music (Bass 1988:198; Bates 1968; Jensen 1992:67-69; Buck 1990:15-17).

Tramp Steamers

These are vessels, in a similar range of sizes and designs as packets, with no regular schedule, that picked up and hauled cargo and passengers wherever they may. In the heyday of steamboating on the Upper Mississippi, such vessels – also called "wild" boats – often would secure cargoes on the Ohio River or at St. Louis and take them to St. Paul (Morris 1976:200). A number of tramp steamers also operated on the Mississippi between Aitkin and Grand Rapids in the latter decades of the 19th century up until after World War I (e.g., Hart 1952).

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Group II continued :

Log Rafters, Raft Boats, Towboats, Bowboats, or variants

These are boats that pushed, towed, or directed barges, log rafts, or log booms. Originally, they were almost exclusively stern-wheel steamers; later, some were propeller-driven (Larson 1949:93-98; Ryan 1976, II:30-31; Bass 1988:203). Such vessels were rather short and were furnished with large boilers and powerful engines to ensure control and maneuverability even in high winds or currents (Buck 1990:11; Jensen 1992:80-81).

- Alligators or "Gators": Northern Minnesota logging vessels once described as flat-bottomed scows equipped with steam or gasoline-powered winches. Similar in function to a headworks or horse headworks. Used primarily for moving log booms across areas of open water.
- Bowboats: Vessels tied across the front end of log rafts that, through the forward or reverse thrust of its engines, could move the raft to either the port or starboard. Operation of the bowboat was directed by the captain of the towboat secured to the back end of the raft (Hankins in Anonymous 1977:2).

Channel Maintenance Vessels

These are vessels used primarily for the maintenance of boat traffic lanes and ports, including snagboats, dredges, and light tenders (Bates 1968:5; Bass 1988:206).

Launches and variants

Launches and variants were steam- or motor-driven vessels used for moving people, supplies, mail, and the like. Launches, many with cabins and canopies, have long been used on northern lakes like Mille Lacs and Leech as for-hire recreational fishing boats. Mail launches also ran on many lakes. Steam-launch, passenger shuttle service on Lake Minnetonka complemented a land-based, mass-transit, streetcar system of which it was a part. Speedboats would also fit in this category.

Excursion Vessels

Excursion vessels are any of a variety of steam- or motor-driven vessels primarily used for transporting people on sightseeing, holiday, or party excursions (Jensen 1992:81-82).

Ferryboats

Ferries are vessels powered by steam or gasoline engines – sometimes a modernization or replacement of an older ferry at the same location. Some 20th century ferries in Minnesota had steel hulls (Roberts et al. 1993:55; Bass 1988:203). One steam ferry in operation on the Mississippi River at Winona from 1865 to 1878 had two hulls, 70 feet long, with a paddlewheel mounted between the hulls (Larson 1994:69). (See Ferries, above.)

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Miscellaneous Vessels

These are various types of motorized sailboats, pontoons, speed and racing boats, sea-sleds, submersibles, or other miscellaneous steam, gasoline, alcohol, naphtha, or battery-powered water craft not listed above.

PROPERTY TYPE SIGNIFICANCE

Shipwrecks or the loss of vessels in inland waters of Minnesota was historically a relatively common occurrence, but many were salvaged or removed in order to reuse equipment and machinery as well as to keep waterways open. Additionally, strong currents, flooding, and or ice flows along river systems as well as ice accumulations along shorelines have likely destroyed evidence of many historic craft. Thus, any historic shipwreck or abandoned vessel in Minnesota's inland waters is a rarity and should be considered potentially significant.

Criteria for Evaluation

In most instances, Minnesota's inland water shipwrecks would be evaluated for eligibility to National Register based on multiple criteria. Most common will be a combination of Criterion A, C, and D. Criterion A must be established for each nomination based on the Statewide Historic Contexts developed by the Minnesota State Historic Preservation Office (MnSHPO nd). An inland water vessel's association with a context will largely depend on the vessel's geographic location and date. For example, a flat boat, found in the Minnesota River that had a construction date around the mid-19th century, would most likely be associated with the Early Agriculture and River Settlement period. A flat boat found on the same river with a late 19th century construction date would be associated with the Railroads and Agricultural Development period. A flat boat found on the St. Croix River with a mid-19th century construction date might be associated with both the Early Agriculture and River Settlement period and St. Croix Triangle Lumbering period. At the same time, even though the mid-19th century flat boat had no other distinguishing features, it might contain an assemblage of tools such as axes, saw blades, log dogs, that placed it solely into a St. Croix Triangle Lumbering context. Although a vessel might be evaluated by its association with a single event such as a shipwreck with loss of life or a fire at a dock, the historic context will encompass the event and provide the foundation for the evaluation under Criterion A.

An inland vessel's association with a significant person or group (Criterion B) appears unlikely. A vessel's captain, owner or builder might be considered under Criterion B if the individual was significant in history and the vessel played an important role or factor in the events that made history. A more likely possibility might be a vessel used to start a new town, perhaps associated with a distinct group or association. The historical record must clearly demonstrate an important association between the individual or group and the vessel.

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A shipwreck or abandoned vessel can commonly meet the criteria established under Criterion C. Most historic vessels are representative of a type of craft, or example of a change or evolution of style, or even represent some technique of ship construction. Frequently, Minnesota vessels may have been built with characteristics specifically related to the environment of a lake or river in which the craft was designed to work. For example, Ojibwe canoe builders who created a distinctive regional variation of the bark canoe with wide, flat bottoms known as the Fond du Lac style for operating in the shallow rivers of northern Minnesota (Birk 1989:7) or farmers who annually built a simple boat or flat to transport cargo to market or grain to a mill. Steamboats called rafters and bowboats also were built with distinctive characteristics. Early rafters were normally, stern-wheelers – probably heavily built with pusher bows and equipped with powerful steam engines. Bowboats generally were smaller and more maneuverable, operating closely with rafter at the head of huge log rafts, steering them down river to sawmills. An alligator or “gator” was a type of scow developed by logging companies to handle log booms on lakes in Northern Minnesota. Generally, they were constructed with a barge-like hull, but they seemed to be powered by several means including side wheels, propellers or winches. Of course, Criterion C requires that the vessel retain sufficient integrity such that important elements of its original construction and or design can be identified.

A historic shipwreck or abandoned vessel frequently has the ability to yield *important* archaeological information, thus satisfying Criterion D. Under Criterion D, the wreck must have the potential to provide information to answer research questions established relative to the historic context. Since many vessel types were frequently built without plans or plans are no longer available, research question about vessel architecture can be answered only by archeological investigation of the wreck itself. Questions concerning hull design, materials used in construction, and regional variations in construction techniques are all examples of information that can be ascertained through archaeological investigations of a shipwreck. Because many vessels were utilized for transportation of cargo and/or passengers, cultural materials found in association with a wreck have the potential to provide clear evidence about how the vessel was utilized and insights into the economy and lifeways of people using the vessel at the time of its loss. At wreck sites where the name of the vessel is unknown, cultural materials, such as cargo or tools, may be relevant in establishing a relationship between the wreck and a historic context.

Integrity

A shipwreck or abandoned vessel must retain at least partial aspects of the seven qualities of site integrity (location, design, setting, materials, workmanship, feeling, and association) to be considered eligible. Integrity is relevant under each of the four significance criteria, and may be applicable at a different level in each depending on the vessel type and the context. Fragmentary evidence of a canoe from the Pre-Contact or Contact Period would not be expected to demonstrate the same level of integrity as a canoe associated with Tourism and Recreation. A wooden canoe built in 1900 would be expected to exhibit partial combinations of location, design, setting, materials, workmanship, feeling, and association. A birch-bark canoe built in 1600 might be required only to exhibit fragmentary evidence of materials and workmanship in order to be significant. In many cases, a shipwreck or small vessel (particularly in a river environment) might be moved from its original setting and/or broken up so badly that the vessel no long maintains any of its original design or character. The vessel's relevance to a historic context becomes of prime importance when

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dealing with limited site integrity. Generally, a vessel must maintain some key aspect of structural integrity (design and materials) to be considered eligible.

HISTORIC CONTEXT AND RELEVANT PROPERTY TYPES

Shipwrecks or abandoned vessels of practically all types might be found in any historically important inland waterway. A lake, for example, might have examples of various types of steamboats, gas power boats, sail boats, canoes, and flats. Although they are unified by their association with the waterway, their significant can be evaluated by the vessel's association with a historic context.

Pre-Contact and Contact Periods

Any wreck remains or evidence from the Pre-Contact or Contact Period are potentially significant since so few examples of any vessel types have been identified from those periods. A vessel's association with a specific context is important, but it may not be possible unless the craft is clearly associated with archaeological evidence that supports that association. The site's integrity must be such that important elements of its original construction and/or design can be identified. Even fragmentary evidence may be eligible if diagnostic features can be documented.

Post Contact Period

Indian Communities and Reservations (1837 to 1934)

Wrecks or abandoned vessel types must clearly demonstrate a geographical and temporal association with an Indian Community or Reservation before it may be considered to be associated with this context. The site should also demonstrate characteristics that represent a distinctive style, design, or character that is clearly associated with Indian traditions. Wreck sites or vessels constructed by Indians but based on non-Indian designs could be considered eligible if builders utilized a distinctive style or character that embodied a Native American tradition or if a vessel were associated with an important event or person.

St. Croix Triangle Lumbering (1830s to 1900s)

Wrecks or abandoned vessel types must clearly demonstrate a geographical and temporal association with the St. Croix Lumbering triangle area, i.e. east of the Mississippi River and south of the Crow Wing River. The vessel type or related cultural material also should demonstrate some affiliation with Minnesota lumbering. Some Group II vessel types should be expected in association with this context, including packets, tramp steamers, steam launches, and tow boats.

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Post Contact Period continued:

Early Agriculture and River Settlement (1840 to 1870)

Wrecks or abandoned vessel types must clearly demonstrate a geographical and temporal association with the Early Agriculture and River Settlement context, i.e. middle and southeastern Minnesota from 1840 to 1870. Group I vessel types such as canoes, bateaux, keelboats, flats, ferries, rafts, and rowboats could be associated with this context. Group II vessel types might include packets, tramp steamers, steam launches or variants.

Railroads and Agricultural Development (1870 to 1940)

Wrecks or abandoned vessel types must clearly demonstrate a geographical and temporal association with the Railroads and Agricultural Development context, i.e. southern one half and western one-fourth of the state from 1870 to 1940. Group I vessel types such as canoes, bateaux, keelboats, flats, ferries, rafts, and rowboats could be associated with this context. Group II vessel types might include packets, tramp steamers, steam launches, ferryboats, tugboats, and towboats, plus variants.

Northern Minnesota Lumbering (1870 to 1930s)

Wrecks or abandoned vessel types must clearly demonstrate a geographical and temporal association with the Northern Minnesota Lumbering context, i.e. north central and northeastern Minnesota from 1870 into the 1930s. The vessel types or related cultural material also should demonstrate some affiliation with the Minnesota lumbering. Group II vessel types should be expected in association with this context, including packets, tramp steamers, steam launches, ferryboats, tugboats, and towboats, plus variants.

Tourism and Recreation in the Lake Regions (1870 to 1945)

Wrecks or abandoned vessel types could be associated with any geographical location statewide under the Tourism and Recreation context. The vessel type should demonstrate a period of use after about 1870 and should demonstrate some recreational function. An association with the Tourism and Recreation context under Criterion A is not necessarily justification for eligibility; it must be *significant* under this context. The vessel could demonstrate a distinctive design, style, or character (Criterion C) and/or have the ability to provide important information (Criterion D). Some Group I and II vessel types should be expected in association with this context, including canoes, rowboats, tramp steamers, steam launches, fishing boats, and powerboats.

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Post Contact Period continued:

Urban Centers (1870 to 1940)

Wrecks or abandoned vessel types could be associated geographically with Minneapolis, St. Paul, Duluth, Rochester, St. Cloud, Mankato, Winona, Moorhead, or Stillwater. The vessel type should demonstrate a period of use after about 1870 and should demonstrate some uniquely urban function. An association with the Urban Center context under Criterion A is not necessarily justification for eligibility; it must be *significant* under this context. The vessel could demonstrate a distinctive design, style, or character (Criterion C) and/or have the ability to provide important information (Criterion D). Some Group II vessel types should be expected in association with this context, including tramp steamers, steam launches, and ferryboats.

REGISTRATION REQUIREMENTS

In order for a shipwreck, wreck, or abandoned vessel found in the inland waters of Minnesota to be eligible for the National Register, it must be at least 50 years old, retain sufficient integrity, and meet one or more of the following significance criteria:

Criterion A

The vessel must be associated "with a single event, patterns of events, repeated activities, or historic trends" related to one or more of the Statewide Historic Contexts developed by the Minnesota State Historic Preservation Office. The association to the context must be clearly demonstrated, and the role that the vessel played must be clearly defined. Under Criterion A, the role that the vessel played in an event or pattern of events must be an important one. For example, the vessel might have provided a critical supply link to a river town prior to the arrival of the railroad during the Early Agriculture and River Settlement period, or a vessel may have been important to the development of a local or regional logging industry. Application of Criterion A should be established using historical or archaeological investigations and research. The investigations or research should be used to demonstrate the association and relationship between the property type and its socioeconomic/historic context(s).

Criterion B

Under Criterion B, the vessel must be associated with an important historical figure or group. The vessel must have played an important role or aspect in the person's or groups' lives within a relevant historic context. The relationship between the historic figure and the vessel must be clearly supported by historical documentation or irrefutable archaeological evidence. For example, a dugout used by the American explorer Zebulon Pike would be important during the Initial American context of the Contact Period if the dugout could be clearly associated with Pike.

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Registration Requirements continued:

Criterion C

Under Criterion C, the vessel must demonstrate a distinctive or representative design or construction. It may demonstrate a unique design, or it may represent a trend. The vessel also must retain sufficient integrity to distinguish those characteristics or features that identify a vessel type or important component within a class. Almost all historic vessels in Minnesota's inland waters should be eligible under Criterion C (if they exhibit the minimum levels of integrity), since so few examples of historic vessel types are still in existence.

Criterion D

A wreck or vessel must exhibit archaeological research potential within one or more Statewide Historic Contexts in order to qualify under Criterion D. The property type must have the potential to increase our understanding of past lifeways, events, techniques of construction, elements of construction, systems of operation, or function within the historic context to which the property type relates. The wreck must be demonstrated to be a source of potential *important* information within a historic context or research design. Under Criterion D, the vessel is eligible if it has been used to resolve research questions or is a potential source of data.

Integrity Requirements

Integrity is the ability of a historic property to convey its significance. With regard to the seven aspects of integrity defined in National Register Bulletin 15, unless they have been totally salvaged or artificially buried, shipwreck sites usually retain aspects of *location, setting, feeling, and association*. Unless a vessel was extensively rebuilt prior to its sinking and that rebuilding lacks integrity in its own right or is outside the period of significance, most shipwrecks retain integrity of *materials and workmanship*. Depending on the nature of the wreck event and the extent of post-depositional impacts, some shipwrecks also retain integrity of *design* (i.e., they are recognizable as a vessel of a particular type).

The level of site integrity required to establish eligibility of an individual shipwreck will vary according to the significance criterion applied, property type, context association, and the particular conditions at that site. Hull integrity and intactness of the artifactual record should be addressed individually for each site, as applicable. A vessel need not be structurally intact in order to retain integrity. Under Criteria A and B, site integrity should be demonstrated to the level required to justify the association with the event, pattern, or individual. Under Criterion C, a shipwreck may be significant even if it is in relatively poor condition if it is the only example of its type. A shipwreck which is significant on the basis of a structural component or design element can be eligible so long as that component or feature is still present.

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Registration Requirements continued:

Similarly, under Criterion D, the level of artifactual material required to establish site integrity will vary according to the specific research questions which apply to the site. Many shipwreck sites have been looted to varying degrees. The lack of a complete artifactual assemblage will not disqualify a site from eligibility if the level of remaining material can be shown within the nomination to meet that required with regard to the research questions to be addressed.

Shipwrecks are generally violent and destructive in nature and many shipwrecks have been salvaged or looted, hence some degree of damage is to be expected at all shipwreck sites. The requirement of site integrity can be satisfied if the wreck retains the basic diagnostic elements of the hull (Criterion C) or if important information can be reconstructed through archaeological investigation (Criterion D). Basic diagnostic elements would include the bow and/or stern, elements of the midsection, upper and/or lower hull, fittings, rigging, etc. A shipwreck scattered into many pieces may retain integrity if the individual pieces retain integrity. From a design standpoint, the midships area is the most redundant area of a ship's hull. Variation in hull form is more extensive in the bow and stern areas. The major exception to this is a side-wheel vessel where mid-hull design elements may be crucial to understanding how the vessel was built and how it functioned.

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GEOGRAPHICAL DATA

All of the inland waters within the boundaries of the State of Minnesota, including lakes and rivers, with the exception of Lake Superior (Figure 1).

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SUMMARY OF IDENTIFICATION AND EVALUATION METHODS

This Multiple Property Documentation Form for Shipwrecks of Minnesota's Inland Waters was prepared under contract for the State Historic Preservation Office (SHPO) of the Minnesota Historical Society by Mid-Atlantic Technology and Environmental Research, Inc (MAT/ER). It was developed as part of a multi-task project with the following goals: 1) conduct an intensive literature search to identify potential shipwrecks (and abandoned vessels) in Minnesota's inland waters; 2) create an inventory of potential inland waters shipwreck sites; 3) conduct underwater archaeological investigations on selected wreck sites; and 4) complete a Multiple Property Documentation Form for Shipwrecks in Minnesota's Inland Waters. The project was intended to provide Minnesota with a baseline study from which Minnesota's SHPO can build, enhance, and manage its inland waters submerged cultural resources, especially shipwrecks.

The intensive literature search began with a review of secondary sources, focusing on general state history and waterborne transportation in Minnesota. Research progressed from secondary literature through primary sources as well as contact with divers and appropriate historical organizations around the state. MAT/ER's historian consulted local depositories which provided primary manuscripts, maps, and a variety of secondary sources including published shipwreck lists. Sources consulted include the following:

- ◆ Minnesota Historical Society Library, St. Paul, Minnesota.
- ◆ Minnesota Historical Society Map Library, St. Paul, Minnesota.
- ◆ University of Minnesota, Walter Library and Wilson Library, Minneapolis, Minnesota.
- ◆ Mississippi Valley Research Center, Murphy Library Special Collections, University of Wisconsin, La Crosse, Wisconsin.
- ◆ United States Army Corps of Engineers Library, St. Paul, Minnesota.
- ◆ United States Army Corps of Engineers Map Library, St. Paul, Minnesota.
- ◆ Goodhue County Historical Society, Red Wing, Minnesota.
- ◆ University Library, University of Wisconsin, River Falls, Wisconsin.

The staff of many other depositories, historical societies, libraries, and related organizations around the country were consulted for potential information and leads to outside source information that might relate to Minnesota Inland wrecks.

Since the project encompassed the entire state, the Statewide History Contexts developed by the Minnesota SHPO were utilized in the development of the Multiple Property Documentation Form and property types. Some contexts that have little or no potential to be related to inland water vessels were generalized or ignored.

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Summary of Identification and Evaluation Methods continued:

Because so little is known about individual types and so few examples of vessel types (i.e. property types) are expected to be identified in Minnesota's inland waters, the vessel types were not grouped into categories but only into two broad classes based on the vessels mode of power. The description of vessel types utilized in this document were developed from a wide range of sources. For un-fueled and smaller craft, some of the more notable general works included Edwin T. Adney and Howard Chapelle's *The Canoes and Skin Boats of North America* and *A History of Seafaring* edited by George F. Bass. A number of less obvious and sometime obscure sources also contributed, including *Early Loggers in Minnesota* by J. C. Ryan and a *History of the White Pine Industry in Minnesota* by Agnes M. Larson. More sources were available concerning fuel-powered vessels, including general works like *Ships and Shipwrecks in the Americas* by George F. Bass and more regional works such as *Steamboats on the St. Croix* by Anita Buck and *Early Steamboating on the Minnesota and Red Rivers* by Capt. Edwin Bell.

This document was prepared by utilizing the National Register Bulletin 16B, *How to Complete the National Register Multiple Property Documentation Form* and in accordance with The Secretary of Interior's Standard and Guidelines for Archaeological and Historic Preservation. Criteria for assessment of significance of inland waters shipwreck sites were base on National Register Bulletin 15, *How to Apply the National Register Criteria for Evaluation* and National Register Bulletin 16A, *How to Complete the National Register Form* (U.S. Department of Interior 1991).

A total of three properties were investigated during the preliminary field investigations related to this project. Two vessels, the *White Bear* in Lake Minnetonka and the *Bull of the Woods* in Burntside Lake, were determined to be eligible for inclusion to the National Register based on those investigations. The third, the *Swan* in the Mississippi River near Aitkin, lacked sufficient site integrity to be considered eligible.

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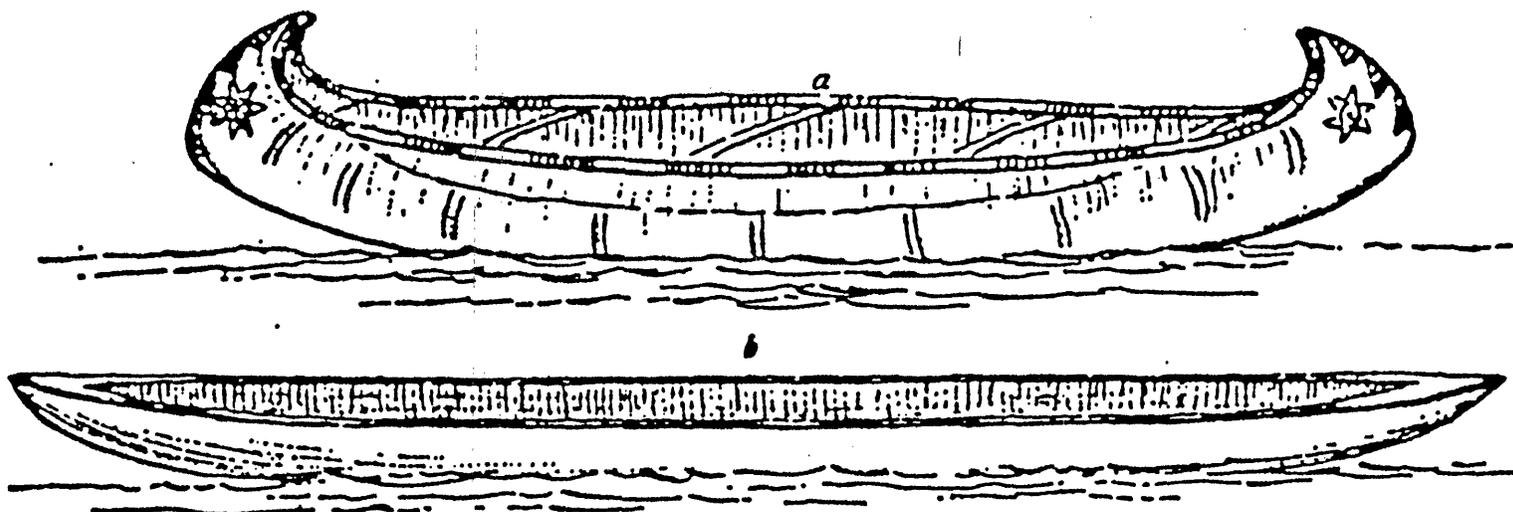
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a. OJIBWA CANOE OF BIRCH-BARK. b. DAKOTA DUG-OUT CANOE.—Collin.



H. Lewis

Figure 2. Top: Indian canoes (from Winchell 1911:589) Bottom: Dakota dugouts at Kaposia in 1848, Little Crow's village at current location of St. Paul (Henry Lewis painting, Minnesota Historical Society).

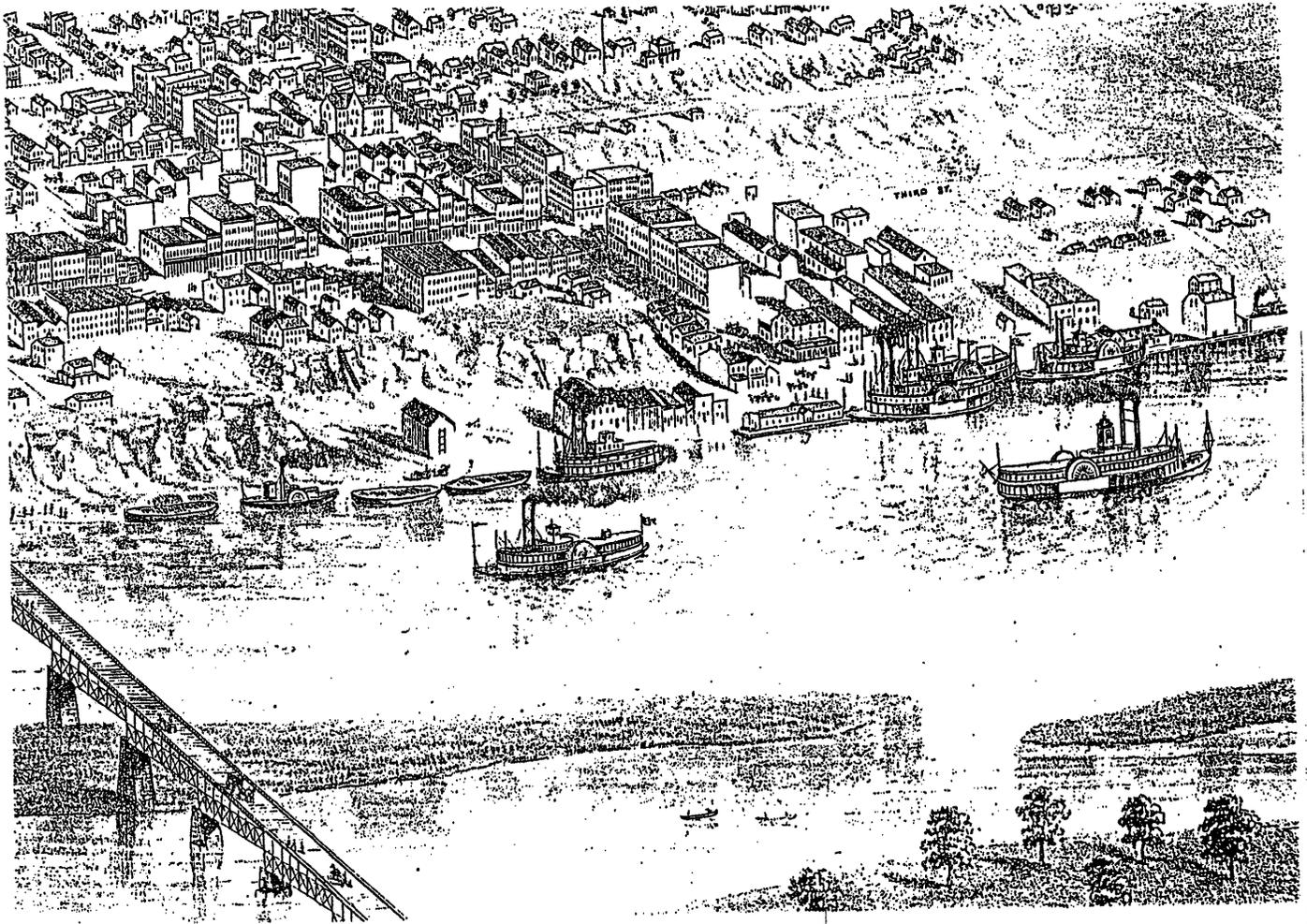


Figure 3. Steamboats at the upper and lower landings in St. Paul in 1867 (Minnesota Historical Society).

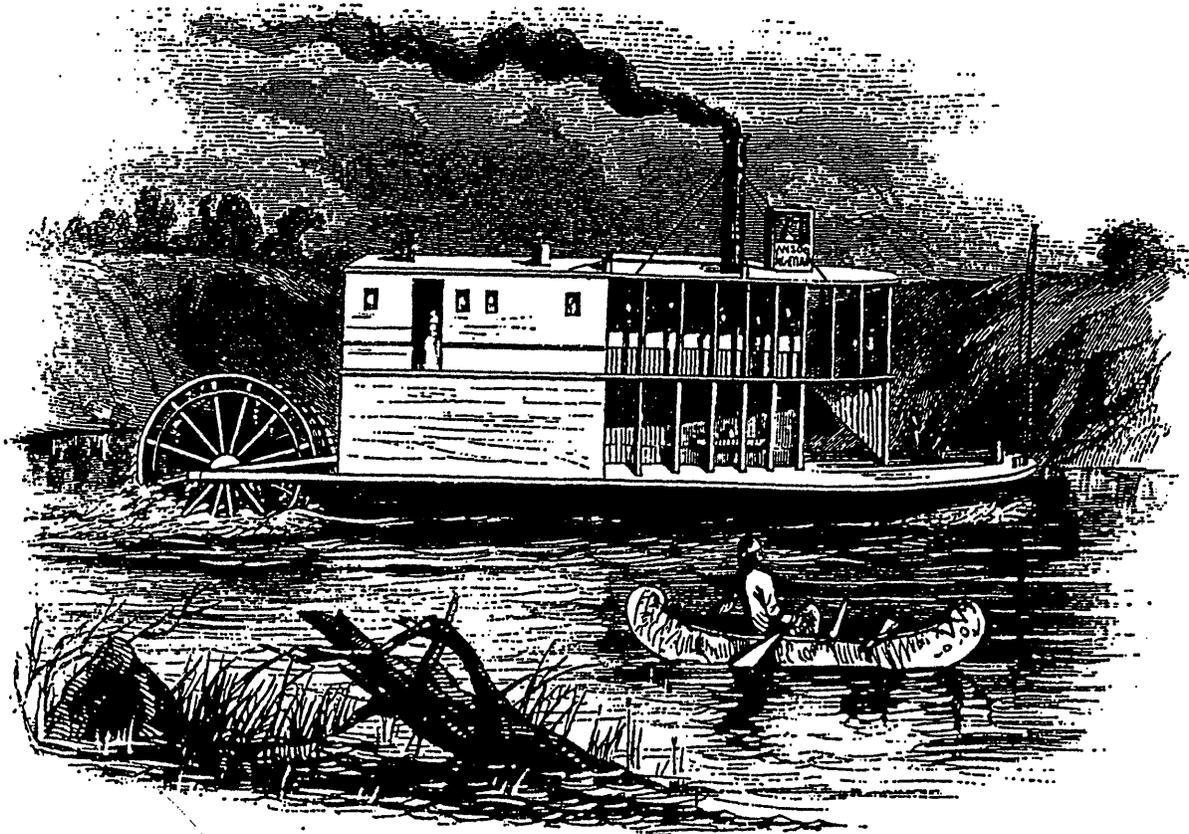
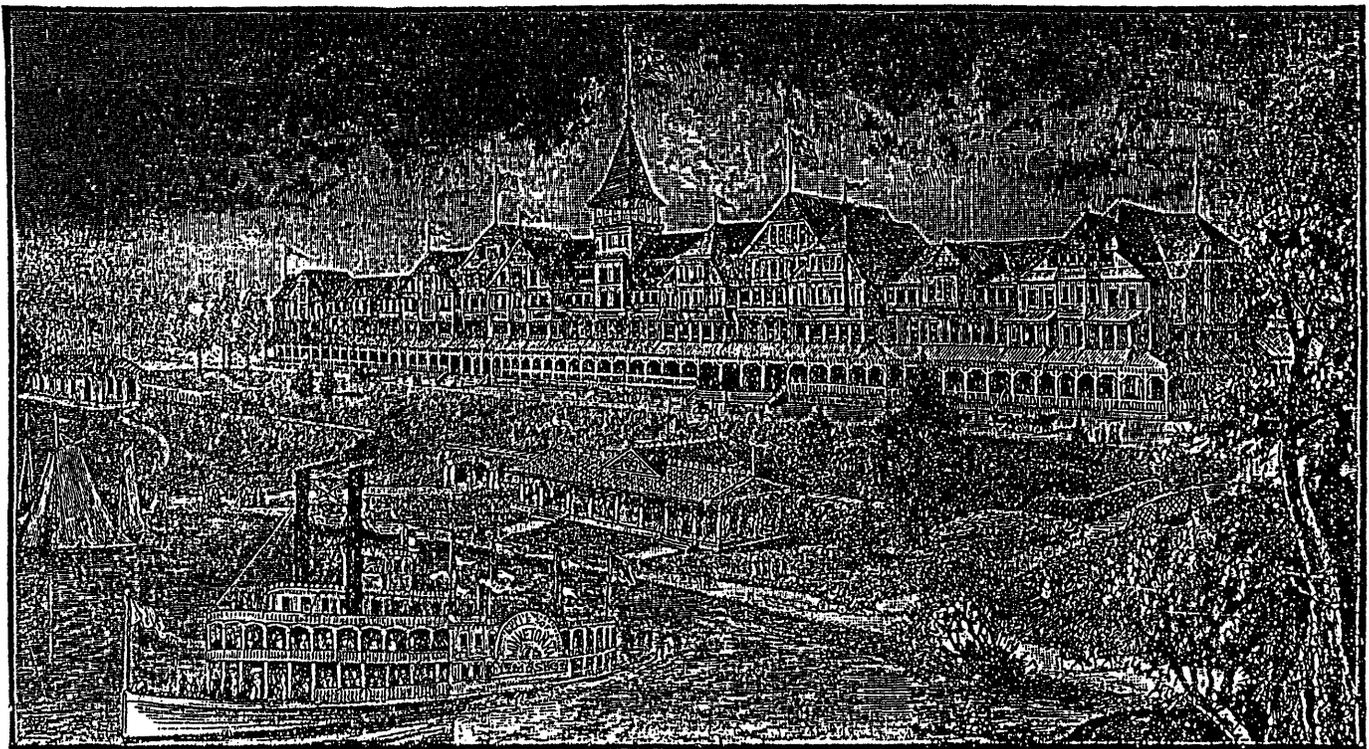
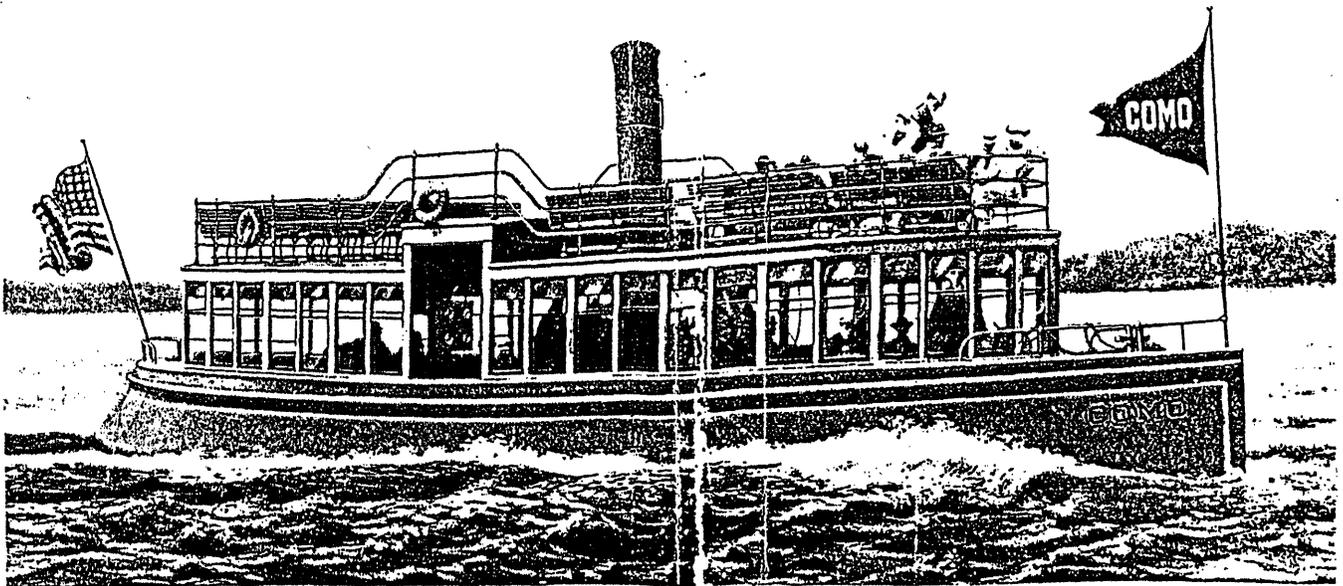
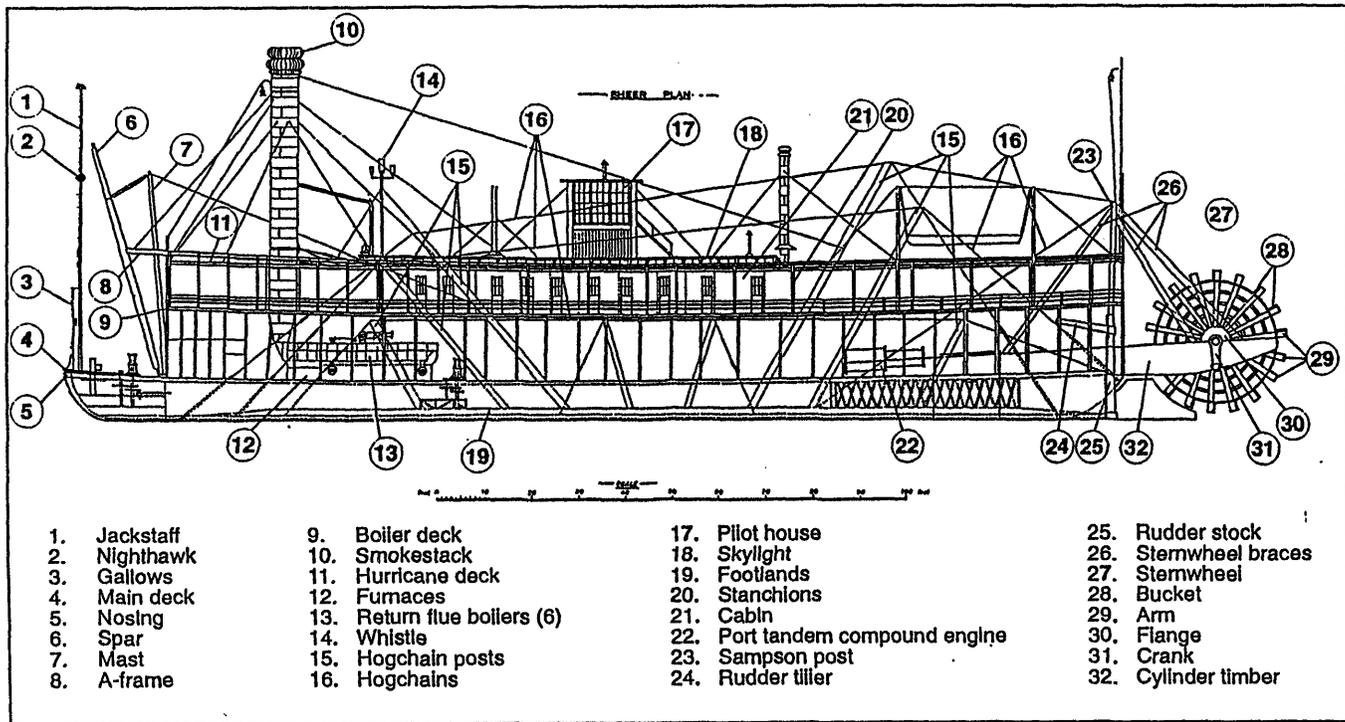


Figure 4. The *Anson Northup*, first steamboat on the Red River of the North (from Gilman et al. 1979:21).



HOTEL LAFAYETTE, MINNETONKA BEACH.

Figure 5. Lake Minnetonka boating. Top: Express boat *Como*. Bottom: Steamer *Minnetonka* in front of the Hotel Lafayette.



Adapted from Engineer (Great Britain), 2 June 1876.

Figure 6. Features of a typical late 19th century Mississippi River steamboat.