113

RIVER & LAKE BOUNDARIES

Surveying Water Boundaries— A Manual

James A. Simpson

CHAPTER 2

Navigability

Introduction to Navigability

2-01 When approaching a water boundary problem, your first decision must be: Is the water body navigable or is it nonnavigable?

2-02 Most of the time the decision is relatively easy—so easy that sometimes one doesn't really give it much thought. That sort of dismissal is dangerous, however, because the results of a boundary determination and title can differ greatly between a navigable waters and a nonnavigable waters decision.

2-03 As a general statement, in American law, the beds of bodies of water that were navigable at the time of statehood are owned by the state, subject to certain control by the federal government.

Your first question on any riparian problem— "Is the water body navigable or not navigable?"

2-04 In early European history—say from 1000 B. C. to 1000 A. D.—all kings and barons, viking chiefs and conquerors were very much interested in navigation. The right to use the waters was reserved to the emperor or king and in no uncertain terms. Roman law, for example, made the distinction between navigable and nonnavigable streams.

Much of the English law incorporated Roman law by way of the Norman Invasion which brought the civil law to England. In turn, English common law was the foundation of American law. This came about because, following the Revolution, everyone was guaranteed all the rights already held, in addition to some new ones. The old rights were embodied in the common law of England as of 1776.

Under English common law all the waters that were affected by the tides belonged to the king, including the beds beneath the waters. Waters not navigable belonged to the land owners on both sides of the water body. Strangely enough, several large lakes in Scotland such as Loch Lomand and Loch Ness were obviously navigable but were not reserved to the crown.

2-05 Two landmark decisions in American law on navigability are *The Daniel Ball,* 10 Wall. 557 (1890) and *The Montello,* 20 Wall. 430 (1874). Excerpts from those decisions follow:
"Those rivers must be regarded as public navigable rivers in law which are navigable in fact. And they are navigable in fact when they are used, or are susceptible of being used, in their ordinary condition, as highways for com-

merce, over which trade and travel are or may be conducted in the customary modes of trade and travel on water. And they may constitute navigable waters of the United States within the meaning of the Acts of congress, in contradistinction from the navigable waters of the states when they form in their ordinary condition by themselves, or by uniting with other waters, a continued highway over which commerce is or may be carried on with other states or foreign countries in the customary modes in which such commerce is conducted on water."

The Supreme Court defines navigability by considering past use as well as possible use of the channel for travel in commerce.

"...the true test does not depend on the mode by which commerce is, or may be, conducted nor the difficulties attending navigation...

"The capability of use by the public for purposes of transportation and commerce affords the true criterion of the navigability of the river, rather than the extent and manner of that use."

2-06 It is important to remember that there are several kinds of navigability and associated tests.

One is navigability in *interstate* commerce. That is the one that is cited by Acts of congress such as the Clean Water Act, Rivers and Harbors Act, the Refuse Act and the like. Often the question of navigability defines the limits of federal jurisdiction.

Another involves a test to determine whether *admiralty* (law of the sea) jurisdiction applies. Admiralty is not within the scope of this book.

The third navigability test, the one most involved in ownership and in water boundary matters, is that of *state waters*. The test involved determines whether or not the state owns the bed as part of their sovereign holdings. For state waters to be navigable no *interstate* commerce uses or possibilities for use need be present.

The state's waters test does not include any interstate commerce requirement.

2-07 Because navigability was strictly tied to the seacoast boundaries under the common law of England, that concept applied in the Thirteen Original Colonies as well—in fact it may still apply today: If an area is subject to the action of the daily tides, it will probably be considered navigable in law.

2-08 *The Daniel Ball* and *The Montello* Decisions concerned shipping under admiralty law, but they heralded the change to our present situation where rivers that were navigable in fact were considered navigable in law.

2-09 In 1935 the U. S. Supreme Court ruled on a case concerning an island along the California coast which drastically changed the determination of boundaries along seacoasts.

The change only affects lands that have been patented.

The *Borax* Decision, *Borax Consol. v. City of Los Angeles* , 296 U.S. 10, held that the boundary of patented lands along the seacoast was at the line of mean high water. Along the seacoasts mean high water is a statistical value which produces a different boundary from that of the line of mean high tide which had been in previous use. The line of mean high water was to be determined from the average height of the high waters over a period of 19 years. That average height was to be projected onto the beach to obtain the boundary.

The Borax Decision affects patented land along seacoast and tidal boundaries only.

The mean high tide line used in previous practice by the GLO and by the Bureau of Land Management was determined by the surveyor from the vegetation growing along the shore and from the topography.

The *Borax* decision does not apply to lands held by the United States as public lands. See *Udall v. Oelschlager,* 392 U.S. 909.

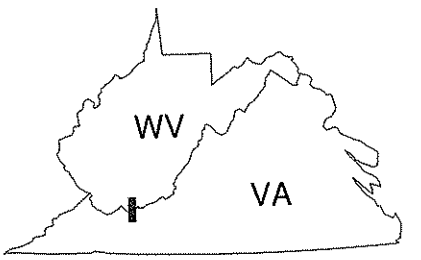
Also, the *Borax* Decision does not apply to inland (nontidal) waters. This point has created some confusion in the past. In particular, *do not confuse the term "average height of waters (or tides)" as having any connection with river or lake boundaries.*

Average height of waters applies to tidal problems only.

CASE STUDY FOLLOWS

United States v. Appalachian Electric Power Co., *311 U.S. 377 (1940)*

2-A.01 This case decided whether the bed of New River in Virginia and West Virginia was a navigable water of the United States. The Appellate Court held that navigability in fact must exist under natural and ordinary conditions rather than by man-made improvements. We study this case because the effect of improvements must be considered in all navigability questions.



2-A.02 Appalachian Power had obtained a license from the State of Virginia to construct a dam in New River at a point just upstream from the town of Radford.

The dispute started when Appalachian Power proceeded to build the dam under the State of Virginia license only.

2-A.03 The Federal Power Commission and the U.S. Corps of Engineers (The Corps of Engineers was charged with administration of navigation permits) claimed the dam would have an adverse affect on navigation of the Kanawha River many miles downstream. New River was a principal

tributary of the Kanawha. The government filed suit in Federal District Court in Virginia (22 F.Supp. 83).

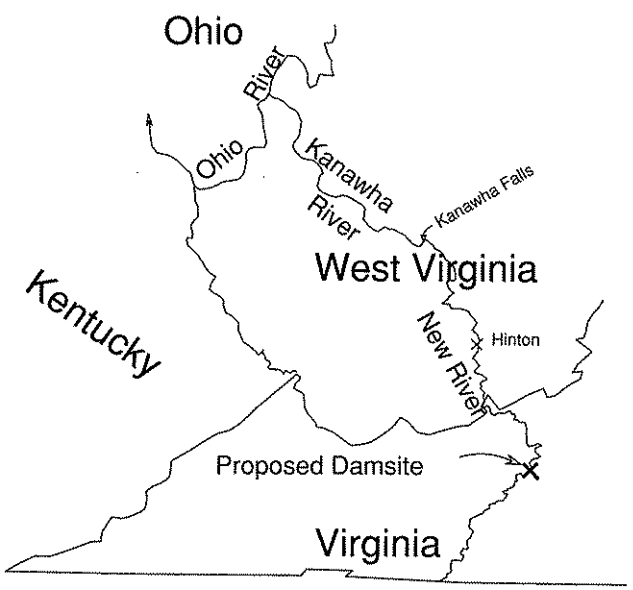
2-A.04 The Government asked the Court to stop the construction and require the work be removed because New River was a navigable water of the United States.

The power company claimed that the river was nonnavigable.

2-A.05 Appalachian Power claimed New River in the vicinity of the dam site was not navigable and that it owned all the land where the dam was to be built; also that the State of Virginia controlled such construction on nonnavigable streams.

2-A.06 Somehow the question of whether New River was navigable became an issue as applied to nearly the entire length of New River from the proposed dam down to the Kanawha.

2-A.07 The District Court decision contains a very detailed description of the river's hydrology, hydraulics, geography and geology. A substantial amount of evidence was entered on these subjects.



New River flows to the Kanawha and thence to the Ohio River.

2-A.08 The Government contended in the trial that New River and Kanawha River were really all one long river and that because the Kanawha was concededly navigable, therefore the entire river was navigable.

The District Court rejected that claim, saying that if that were true, all the mountain brooks and rivulets would then need be classed as navigable.

2-A.09 The Government also claimed that both the state and federal governments had always treated New River as a navigable river.

The Court rejected that claim also, quoting a 1912 report from the Chief of (Army) Engineers. The conclusion quoted was that New River "could not be connected with navigation in the Kanawha by the expenditure of any reasonable amount [of money]."

2-A.10 The government claimed New River had been used in the past for movement of substantial amounts of commerce between the States of Virginia and West Virginia. Also they claimed it was susceptible to such use.

2-A.11 The District Judge ruled that the reach between head of navigation of the Kanawha (at Kanawha Falls) and the town of Hinton was steep and obviously not practicably susceptible for navigation. It seems that there were schemes for building a canal in the 1870s but nothing was ever done.

The District Court found New River to be nonnavigable in spite of testimony about keel boats used to haul ore and supplies in the questioned area.

2-A.12 The District Court decision alludes to much evidence on navigability concerning the reach above Hinton to a point above the proposed dam site near Radford, Virginia. The types of evidence mentioned in the decision are of interest to someone preparing for a trial. The reader is urged to examine the decision.

2-A.13 The Judge stated that the question of navigability is one of fact to be determined from evidence. He did say that he had allowed witnesses to express opinions as to the navigability but that the final decision in the trial was his.

2-A.14 His finding of fact was that "...there is at present no commerce or navigation on New River or, if any, it is entirely local and in a trivial and unnoticeable amount; that the federal government has made no improvements on the river since those heretofore discussed and that it does not have in contemplation any improvements affecting the navigable condition ..."

2-A.15 The finding of local or trivial use in commerce was in spite of the testimony of use of the river above Radford by keelboats of two to four foot draft. They had been used in hauling ores and supplies. A gasoline powered boat was described that drew 12 inches of water when loaded. It had been used in the river near Radford.

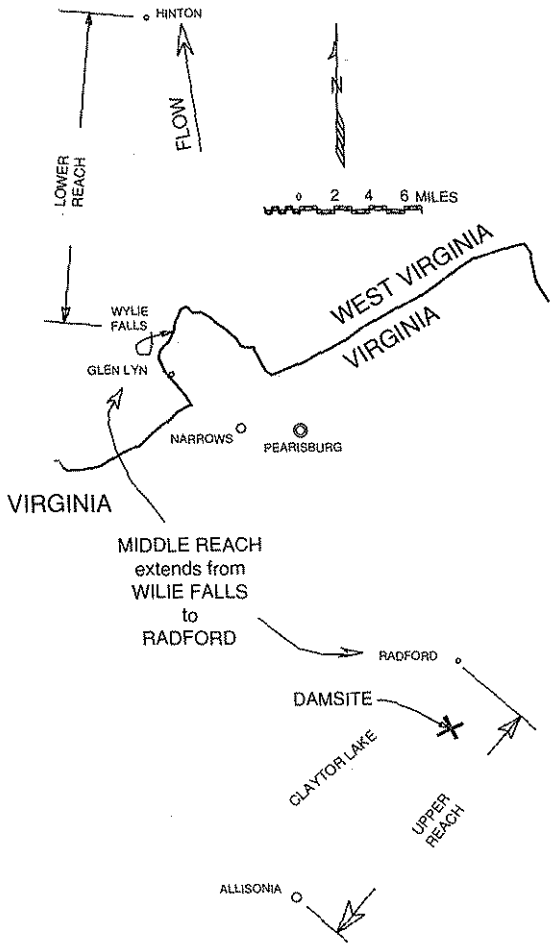
The Government then appealed.

The District Court refused to stop the construction.

2-A.16 Appeals were taken; first to the Circuit Court of Appeals and then to the Supreme Court of the United States.

The Supreme Court divided the river into three reaches according to the general topography contained.

The lower reach was from the town of Hinton up as far as Wylie Falls. Some improvements to this stretch had been made in aid of navigation during the years 1876 to 1883.



Reach designations of New River.

The middle reach was from Wylie Falls to Radford, a 59-mile stretch. That reach had never been improved in aid of navigation except at the Wylie Falls vicinity.

The upper reach was from Radford to the town of Allisonia which had also been improved by the United States during the 1876 to 1883 period.

The U. S. Supreme Court found that the evidence of navigability for the upper and lower reach was more convincing than that of the middle reach. Their opinion was, then, to be directed to the middle reach primarily.

2-A.17 The decision describes the use of keel boats and the difficulties of navigating New River between these points. A railroad was built in the 1880's which paralleled the river. Following the coming of the railroad, the use of the river in commerce practically ceased.

The Supreme Court said, in part, "Use of a stream long abandoned by water commerce is difficult to prove by abundant evidence. Fourteen authenticated instances of use in a century and a half by explorers and trappers, coupled with general historical references to the river as a water route of the early fur traders and their supplies in pirogues and Durham or flat-bottomed craft similar to the keelboats of the New [was adequate for proof in an earlier case, *Economy Power & Light v. United States].*"

The Court also referred to another case which it had found to be navigable, "... seventeen through trips over a period of sixty years from the original exploration; and these together with sporadic trips on parts of the stretch, and considerable use—in connection with gold placer mining... from 1888 to 1915, sufficed to sustain navigability." A footnote indicates they referred to a report of the Special Master in *United States v. State of Utah,* discussed below.

2-A.18 Thus, the Supreme Court concluded that the Wylie Falls to Radford stretch, as well as the lower and upper reaches, were navigable waters of the United States. The right to build the dam would thus necessarily be subject to U.S Corps of Engineers regulations.

Perhaps the most important finding by the Court: A waterway which by *reasonable improvement* can be made available for navigation in interstate commerce is a *navigable water of the United States*, provided there be a balance between cost and need at a time when the improvement is needed.

The fact that there is a dam now in place at a point above the town of Radford and there is a sizable reservoir above it indicates the eventual use of the site. Presumably the power company was required to obtain a federal license and to comply with Corps of Engineers requirements in order to continue construction.

END OF CASE STUDY

Bed Ownership and Control

2-10 Prior to statehood, the Thirteen Original Colonies owned the beds of the navigable waters in and around their states. As more states were admitted to the Union, each new state was given the same powers and rights as the Original Thirteen. This was the Equal Footing Doctrine based on the Comity Clause of the Constitution (Article IV).

Bed ownership gives control— except over federal use of a water body for navigation.

Accordingly, as new states were admitted, among other things, they had equivalent rights to the beds of the navigable waters in their respective states. These were the "navigable waters of the states".

2-11 A different clause of the Constitution, however, reserved to congress the power to "...regulate commerce with foreign Nations, and among the several states, and with the Indian Tribes." It is referred to as the "commerce clause."

Early in the national history, this "commerce clause" was held to mean that the United States had the power to control navigation by means of dams and improvements without compensating owners along the uplands so long as the work was entirely within the bed or river boundaries. Rivers and lakes where this right exists are the "navigable waters of the United States."

Navigational servitude implies that the federal government does not have to pay for the right to place improvements in the bed of a river.

2-12 I emphasize that title to the bed of a navigable river (whether held by a state or by an individual) is not quite the same as title to a city lot useful for building a house. The federal government has what is called a "*dominant servitude*" in all navigable waters of the United States. That servitude subjects all state and private ownership rights within the river bed to control by the federal government in the interest of navigation. The agency which administers this servitude is generally the U. S. Army Corps of Engineers.

In practical action this servitude means that the government need not pay for using what it already controls— so it is a rule of "no compensation".

The dominant servitude is automatically put into action if the project to be constructed is related to the control or improvement of navigation. Just because part of the project is not useful for navigation does not void the action of servitude. The project may even destroy the navigability of other parts of the river if its purpose is in aid of navigability of major channels or waters.

If a river is a navigable water of the United States the river is subject to federal laws such as the Clean Water Act and is probably under Corps of Engineers administrative authority.

2-13 The Rivers and Harbors Act of 1899, 33 U.S.Code 401 provides that the Corps of Engineers' permission is necessary—

"... to excavate or fill, or in any other manner to alter or modify the course, location, condition, or capacity of, any port, roadstead, haven, harbor, canal, lake, harbor of refuge, or inclosure within the limits of any breakwater or of the channel of any navigable water of the United States."

The U.S Corps of Engineers has assumed jurisdiction over dredge and fill operations on uplands adjacent to navigable waters and a permit may be required for construction in nonnavigable streams where navigation is affected. Just what constitutes uplands under the Corp's assumption of jurisdiction is a subject of some litigation.

2-14 The Federal Water Pollution Control Act of 1977, 33 U.S.C. 1251 was passed to "... restore and maintain the chemical, physical and biological integrity of the Nation's waters." Here again the U.S Corps of Engineers and the Environmental Protection Agency were given power to regulate the discharge of pollutants into navigable waters. This authority extends beyond ordinary limits of navigable waters into nonnavigable tributaries and wetlands.

2-15 For navigational improvements the U.S Corps of Engineers' jurisdiction is restricted to the bed of a river, as defined by the ordinary high water mark as an outer limit. Definition of ordinary high water mark is more complex and is covered in Chapter Seven, but in its simplest terms it may be considered the place on the river bank where the terrestrial vegetation ceases to grow because of the action of the water.

Tests for Navigability

Navigable Rivers (Waters) of the United States

2-16 Some method is needed to distinguish between rivers and streams that are ***not*** navigable in fact and those that *are* navigable in fact. Once that determination is made, the legal process can handle the question of naviga-

bility in law. Various tests have been developed by the courts to determine navigability.

The area between opposite ordinary high water mark lines of navigable rivers is under the administrative jurisdiction of the Corps of Engineers.

2-17 The first test we will discuss is the "*navigable waters of the United States test*" which is sometimes called the commerce test. If a water body passes this test, that water body is subject to federal rules such as admiralty and all statutes which are dependent on navigability. Some of the cases we study came about as criminal cases which depended on navigability. You may wonder what that has to do with surveying. The attempt to establish navigability and bring the federal rules into play could just as well have come about in an attempt to bring the Water Pollution Act into play. The navigability requirements would be the same.

2-18 In Roman law the test for navigable waters was pretty simple: navigable in fact— navigable in law. Remember, however, that the Mediterranean was a tideless sea so that the tide didn't play a large role in Roman affairs close to home.

2-19 The tidal criterion under the common law suited the British Isles because most of the rivers capable of carrying larger ships had relatively short reaches inland. Action of the daily tide was the litmus test. No tide—not navigable.

2-20 In American development of the law, the test for navigability changed first in the application of admiralty law. *The Montello* and *The Daniel Ball* were both admiralty issues and there the U.S. Supreme Court decided that the large inland lakes and large rivers capable of carrying larger boats made the common law unworkable in this country.

2-21 In *The Montello* Decision, the Court made it clear that the existence of an occasional obstruction to boat travel would not deprive the river of its navigable status. There the Court said that,

> "...the true test does not depend on the mode by which commerce is, or may be, conducted, nor the difficulties attending navigation..." and, "The capability of use by the public for purposes of transportation and commerce affords the true criterion of the navigability of the river, rather than the extent and the manner of that use."

The U.S. Supreme Court also ruled that to try to restrict navigability to rivers used by boats powered by steam or sail was too narrow a test.

2-22 It was bound to happen that navigability would be claimed stemming from use of a river for floating logs to a sawmill or use by fishermen in small boats.

In *United States v. Rio Grande Dam & Irrigation Co.*,174 U.S. 690 (1899) the U.S. Supreme Court held that the fact that a river will occasionally float logs, poles and rafts downstream in time of high water does not make the river navigable.

(Remember that the U. S. Supreme Court Decisions like this are for determination of federal questions and some states have different rules that may apply to privately owned land in that state.)

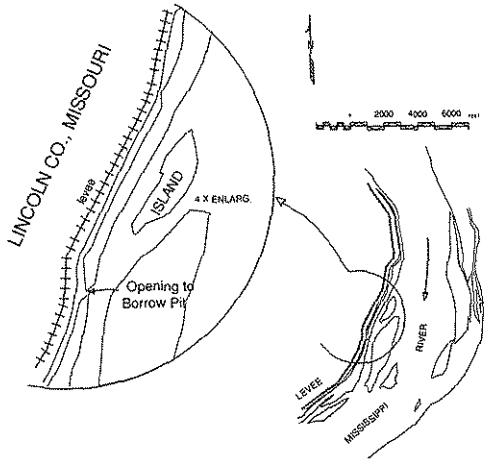
The *Rio Grande* Court also quoted a very early decision *Rowe v. Bridge Co.*, 21 Pick. 344, "[It is not] every small creek in which a fishing skiff or gunning canoe can be made to float at high water which is deemed navigable, but in order to ... give it the character of a navigable stream ... it must be generally and commonly useful to some purpose of trade or agriculture".

CASE STUDY FOLLOWS

United States v. Ross, *74 F.Supp. 6* (1947)

2-B.01 The U. S. Attorney wanted to prosecute Howard Ross. In order to make the charge stick, the crime had to have been committed on navigable waters of the United States. We take up this case because it shows how the courts have considered small but deep channels alongside a navigable river to be nonnavigable. Contrast this case with the *Packer v. Bird* case.

2-B.02 Howard Ross was charged with reckless operation of a boat in violation of a federal law. The incident occurred in a borrow pit alongside a levee on the Missouri side of the Mississippi River. The borrow pit was filled with river water at the time. Ross had loaded his boat with 10 hunters and, when it sank, three passengers drowned.



Vicinity map for the Ross Case on the Mississippi River.

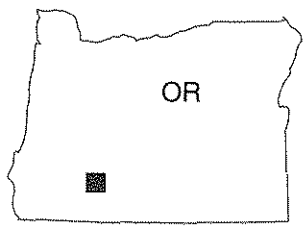
2-B.03 Because there was a 3-foot deep waterway connection to the Mississippi River and because the water was six to seven feet deep, the government contended the borrow pit was a navigable water of the United States. The only evidence of use of the borrow pit for commerce was that Howard Ross provided duck hunters with an informal ferry service to the hunting on the levee banks. This only occurred during hunting season. During dry spells the opening to the Mississippi dried up and motor boats could not operate in the borrow pit.

2-B.04 The Court found that this was not evidence of use in interstate commerce and that "mere depth of water, without profitable utility, will not render a water course navigable in the legal sense", quoting *Harrison v. Fite*, 148 F. 781. The borrow pit was held to be nonnavigable.

Remember that this trial considered navigability as affecting application of federal jurisdiction which is based on the requirement of interstate commerce.

Johnson v. Wurthman, 227 F.Supp. 135, (1964)

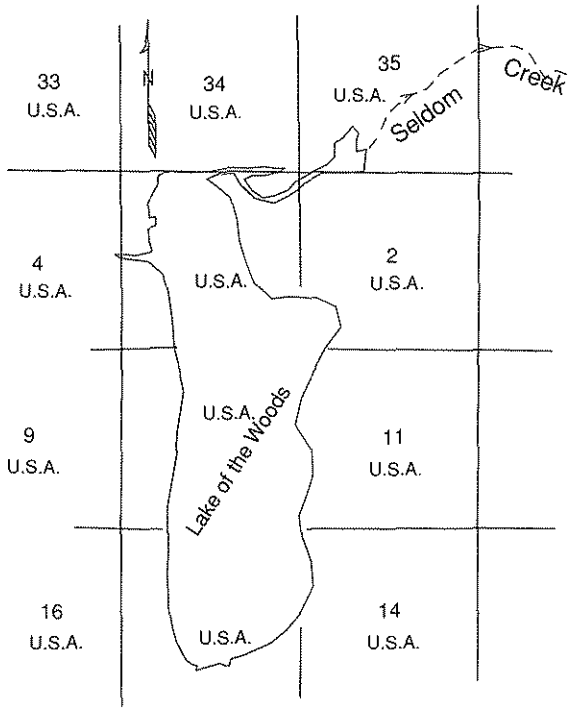
2-C.01 Inevitably, someone claimed that navigable waters of the United States would include lakes that were entirely surrounded by lands *owned* by the United States. A man named Johnson made that claim. This Oregon case illustrates how the Courts handled that situation.



2-C.02 Johnson owned a boat which caught fire on a lake causing the death of a child. If the lake had been declared a navigable waterway of the United States, under admiralty law he would have been liable for less damages .

2-C.03 Lake of the Woods in southern Oregon is a rather isolated mountain lake suitable for recreational boating. The only outlet to the lake is by way of a small stream named "Seldom Creek" because it rarely runs. Because Seldom Creek was not practically capable of becoming a waterway for commerce leading to Klamath Lake, the Court dismissed the whole thing, saying "it is of no importance that the United States happened to own the land surrounding the lake.

The Court held that mere ownership of the surrounding land does not make the waters into navigable waters of the United States.



Lake of the Woods from USGS maps.

Minnehaha Creek v. Corps of Engineers, 449 F.Supp. 876 (1978)

2-D.01 This dispute concerned the navigability of Lake Minnetonka and Minnehaha Creek in Minnesota among other issues. Navigability claimed by the Corps of Engineers was disputed. If the waters were classed as "navigable waters of the United States" local owners were required to get a permit from the U.S Corps of Engineers for any construction involving the bed of the lake or stream.

2-D.02 Findings of Fact by the Court relating to navigability were:

The Corps claimed Minnehaha Creek was part of a navigable channel which connected to the lake by railroad commerce.

a) Lake Minnetonka's water levels were controlled by a fixed crest dam. The depth of the lake averages forty feet with some depths up to 100 feet. Minnehaha Creek is the lake's single outlet.

b) Minnehaha Creek flows into the Mississippi some 20 miles from the lake outlet. Flow is variable and intermittent. During the summer and fall there is not enough depth for any form of navigation.

c) There is no history of navigation, private or commercial, on Minnehaha Creek.

d) The history of navigation on Lake Minnetonka included canoe travel prior to settlement. After the dam raised the lake level, steam powered boats used the lake as well as log rafts.

Luxury steamboats operated on the lake from Civil War times until 1926. After 1867 steamers carried rail passengers from a railroad at Wayzata across the lake to Excelsior, a major town on the lake shore. Mail was carried by boat to Minnehaha Creek and thence by horse-drawn stage to other points.

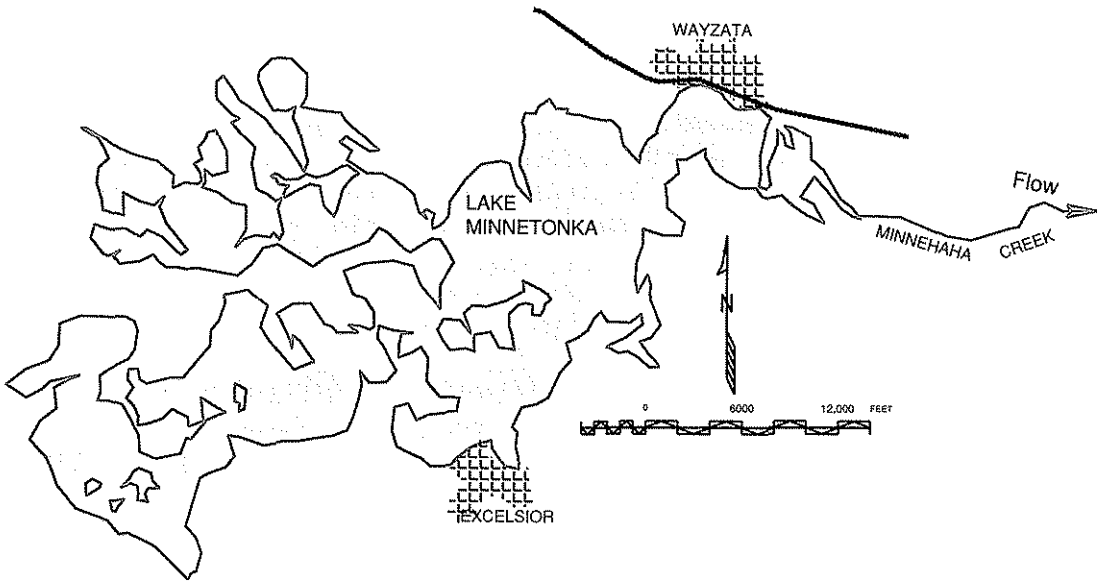
Non-use in commerce of a navigable waterway for as long a period as 100 years does not change the navigable status.

Grain and lumber products were carried to mills and shipped by rail from that point on.

e) In 1916 the Corps of Engineers had advised a railroad company that their permit was required for construction of a bridge across an arm of Lake Minnetonka. No other action by the U.S Corps of Engineers had exercised any authority over the lake from 1916 until 1945.

f) In 1945 the U.S Corps of Engineers advised the State of Minnesota that Minnehaha Creek was navigable and the state had treated the stream in that manner since 1945.

g) The 1976 use of the lake was limited to recreational use by small boats, except that three excursion boats carried passengers for hire and several marinas rented out boats for recreation.



Lake Minnetonka Vicinity.

h) The St. Paul District of the Corps of Engineers issued a report in 1975 declaring Lake Minnetonka and Minnehaha Creek to be navigable waters of the United States.

2-D.03 The Corps' claim was not based on Lake Minnetonka and Minnehaha Creek being a part of a *channel* that formed an interstate waterway. Instead they claimed that the waters were used for interstate commerce through railroad and other forms of commercial transportation.

2-D.04 The first thing the Court did was to rule that the Corps' finding of navigability was not binding on the Court; the determination would be made from examination of evidence only.

2-D.05 Quoting *Economy Power and Light v. United States*, 256 U.S. 113 (1921) the Court agreed that navigability in law is not destroyed just because the watercourse is interrupted by occasional natural obstructions. Also, a river that has not been used for navigation for over 100 years is still considered navigable for federal regulatory purposes. Further, that a water body that may be made navigable by reasonable improvement could be considered navigable.

2-D.06 However, the ruling was that the navigability had to be based on use in interstate commerce as a link to other navigable waters. The Court cited a case on the Great Salt Lake (obviously navigable) where use in interstate commerce was denied although salt was carried by barges to a

railroad siding for shipment to other points which could have been out of state. *Hardy Salt v. Southern Pacific*, 501 F.2d 1156.

2-D.07 Because Minnehaha Creek was never part of any link in interstate commerce — via the Mississippi for instance — Lake Minnetonka was not part of the navigable waters of the United States. The lake would remain navigable under the state's waters test, it is believed.

Navigability and Improvements

2-23 Another claim bound to rise is that the test should be applied only to the river in its natural state and before any improvements have been made in aid of navigation. *St. Anthony Falls v. St Paul,* 168 U.S. 349, (1897) touched on the subject. The Court found that merely because man-made chutes were required to move logs from the river above a power dam to the river below the dam did not make the river nonnavigable in the whole stretch.

Later on this was clarified and reinforced.

Summary

2-24 To summarize, as far as the *application of federal laws extends*, the test for navigability is:

1) The waters were used, or capable of being used, in their ordinary condition, as a highway for commerce.

2) The waters were used by customary modes of such transportation.

3) The waters form a continued waterway over which commerce is or may be carried on with other states or foreign countries.

4) An occasional obstruction will not make it nonnavigable.

5) Mere log floating at high water does not make the river navigable. Interstate transport of the logs might affect the decision on log floating, however.

6) Fishing or hunting uses at high water does not make the river navigable.

7) The river in its natural state of flow, gradient and regularity of flow was capable of navigation with "reasonable improvements."

8) There is also a *threefold* test: (a) the river is *presently* being used or suitable for use, or (b) it has been used or was suitable for use in the

past, or (c) it could be made suitable for use in the *future* by reasonable improvements.

2-25 In a more recent ruling, on evidence that owners of livestock occasionally used boats to haul their cattle and sheep between the mainland and islands in the Great Salt Lake (which is entirely contained in the State of Utah), the Supreme Court said that "The lake was used as a highway and that is the gist of the federal test [of navigability]." *Utah v United States*, 403 U.S. 9, (1971). But see *Hardy Salt Co. v. Southern Pacific*, 501 F.2d 1156.

END CASE STUDY

The State's Waters Test

The second test under discussion is for navigable waters of the states.

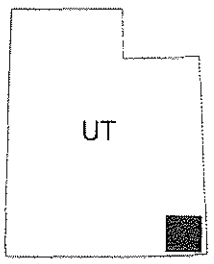
2-26 If a water body fitted the requirements of this test at statehood, the beds of the waters became the property of the state in which they were located. The state may have granted away some of those rights in the meantime, however.

Any rights held by the states, other than the Thirteen Original Colony states, are owing to the Equal Footing provision of the Constitution. For that reason, the test as to whether a river is a navigable water of the state is a federal test. State legislatures therefore cannot change that law. However, there is no requirement that there be interstate commerce in the "navigable waters of the state" test.

2-27 Other than no interstate use requirement and some additional considerations, the same rules usually apply to navigable waters of the states. The same water body may be found navigable under both tests. I am informed that a water body found nonnavigable under the state's test may be found navigable for federal jurisdiction purposes.

CASE STUDY FOLLOWS

***United States v. State of Utah**, 283 U.S. 64 (1931)*



2-E.01 This original jurisdiction case concerned title to the beds of the Green River, the Grand River and the Colorado River within the State of Utah. What was then called the Grand River is now named as part of the Colorado River in the States of Utah and Colorado.

This case is particularly important to us because it sets out clearly that a river need not be navigable in all of its reaches. The same river can be not

navigable in part mixed in with navigable stretches. The case also sets out that the susceptibility or capability for navigation at the time of statehood must also be considered.

2-E.02 The United States, as owner of the uplands in Canyon Lands National Park and of other public lands, had issued oil and gas prospecting permits on areas covered by the beds of these rivers under the assumption that these rivers were not navigable and the beds belonged to the United States. The United States claimed that it acquired the land from Mexico and its title included the beds of all the rivers except where recognized grants existed.

2-E.03 Utah, claiming the rivers were navigable, has issued and delivered oil and gas leases covering the same areas of the river beds.

2-E.04 The question of navigability was not tried to determine whether the waters were "navigable waters of the United States" presumably because there was no claim of usage of the river in interstate commerce.

2-E.05 Whether the waters were "navigable waters of the State of Utah" was the question.

2-E.06 A Special Master tried the case and found that some reaches were navigable and some were not navigable. Both parties disagreed with the findings.

2-E.07 The U. S. Supreme Court stated the primary question thus:

"...The question here is not with respect to a short interruption of navigability in a stream otherwise navigable, or use of a negligible part, which boats may use, of a stream otherwise nonnavigable. We are concerned with long reaches with particular characteristics of navigability, which the master's report fully describes."

2-E.08 Court described each of the rivers.

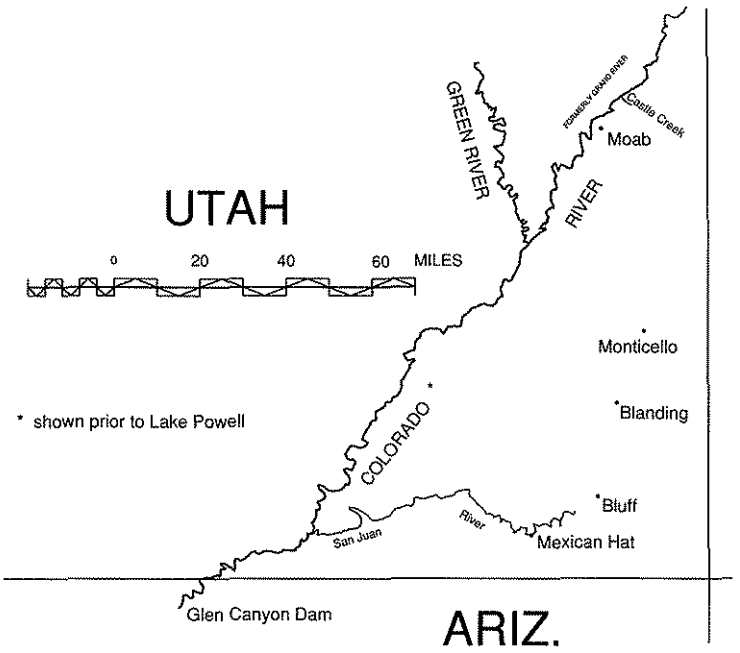
"The question of that susceptibility [of use in commerce] in the ordinary condition of the rivers, rather than of the mere manner or extent of actual use, is the crucial question."

And later,

"The extent of existing commerce is not the test. The evidence of the actual use of streams, and especially of extensive and continued use for commercial purposes, may be most persuasive, but where conditions of exploration and settlement explain the infrequency or limited nature of such use, the susceptibility to use as a highway of commerce may still be satisfactorily proved..."

And still later,

"Utah, with its equality of right as a state of the Union is not to be denied title to the beds of such rivers as were navigable in fact at the time of the admission of the state either because the location of the rivers and the circumstances of the exploration and settlement of the country through which they flowed has made recourse to navigation a late adventure or because commercial utilization on a large scale awaits future demands."



The Colorado River in Utah.

2-E.09 With regard to sand bars, the U. S. Supreme Court described the difficulties of navigation where crossing bars and rapids are present. They also referred to the known difficulties in navigating the Missouri and the Mississippi Rivers because of sand bars. The Court ruled:

"...the river is navigable in fact, although its navigation may be encompassed with difficulties by reason of natural barriers such as rapids and sandbars."

2-E.10 Of some importance also, is one of Utah's exceptions to the Special Master's report. It concerned a 4.35 mile stretch of river just below the junction of the Green and the Colorado Rivers held nonnavigable along with the next reach which was agreed to be nonnavigable. Utah pointed out that there was more water available in the 4.35 miles because of the combined flows below the junction and therefore that reach could be no more difficult to navigate than the Colorado above the junction. The U. S. government did not present facts to refute the challenge and the Court made the change in the point of differentiation, subject to precise determination of the point where it became nonnavigable.

END CASE STUDY

GLO Surveys and Navigability

2-28 The presence of meander lines on the General Land Office plats has been claimed by some as an indicator and even proof of a test for navigability.

When congress established the rectangular system of surveys in the late 1700's, they included the words now found in 43 U.S.C. 931:

"All navigable rivers within the territory occupied by the public lands, shall remain and be deemed public highways..."

The fact that a river was meandered by the original survey does not make it navigable. It may create a presumption of navigability, however.

The General Land Office was required to discontinue surveys where the land fronted on navigable streams. The 1815 Directive from the Surveyor General, which provided *General Instructions to Deputy Surveyors*, has the following requirements:

"Whenever you may be obstructed by insuperable obstacles, such as ponds, swamps, rivers, creeks, etc., you will make the necessary offsets, or work by a traverse or trigonometry, in order to ascertain the distance on any line which is not actually run.

"The courses of all navigable rivers, which may bound or pass through your district must be accurately surveyed and their width taken at those points where they may be intersected by township or sectional lines; also the distance of those points from the sectional corners and from the commencement of any course where you are meandering the river, you will likewise not fail to make special notice of all streams..."

Because those surveyors were required to segregate the navigable rivers from the public lands, the presence of those meander lines on the land plats has been wrongly taken, in the past, to be a conclusive factor in the determination of navigability.

2-29 Consider the test for navigability which might have been performed by a deputy surveyor in the 1800's: He bid on the township to survey, sight unseen; he was to be paid by the mile for the several types of lines to be measured. Meander lines were paid at a different rate, for instance. In the early days there were no reliable maps and the presence of a river might not even be known to him. A horseback reconnaissance of the area would alert him to the river's presence because getting the cook's wagon to the proper place was always a problem. Local settlers, if there were any, would no doubt tell him where the best places were to ford the river. Possibly they would describe the river's flooding habits. But that would be about the average amount of information available.

As soon as he broke through the brush on the river bank our early 1800's surveyor had to decide whether the stream was navigable or nonnavigable, right on the spot. Reason: He had to set a meander corner on the bank if it was navigable. Also, if it was navigable, he was required to meander the bank.

It is quite possible that if the river were wider than 1 chain (66 feet) and too deep for comfortable wading, he would consider it navigable. Some early surveys were conducted in the dead of winter so that the work was actually done on top of the ice and the river completely unnoticed. We will probably never know what conditions influenced the surveyor's decision to meander or not meander where the instructions were silent.

2-30 The 1831 *Instructions to Deputies for Surveying in Mississippi* did have a navigability test for the surveyor: "All streams deemed to be navigable even for small keel boats, and likely to be used as such, by the public, are to be traversed on both banks to give the areas of fractional sections on each side of such streams."

2-31 At the present time it may be considered that the presence of meanders only creates a rebuttable presumption that a river was navigable at the time of statehood. A "rebuttable presumption" here, means that a meandered stream is presumed to be navigable but anyone who disputes the presumption is free to bring in evidence to the contrary.

The U. S. Supreme Court, in one of the Red River cases, stated that the surveyors were not "clothed with the power to settle the questions of navigability". The *Manual of Surveying Instructions, 1973* even quotes the citation.

2-32 After 1881 the GLO surveyors were to meander *all* streams more than three chains in width. A stream less than three chains wide was to be meandered if it was navigable, as before.

2-33 Bureau of Land Management surveyors working along coastal areas are required to meander tidal inlets so they are actually making a first approximation of a navigability determination to this day, on a regular basis.

Navigability of Lakes

Navigability of lakes is determined by the same general rules as are rivers.

2-34 Lakes vary greatly in character. Some are water areas that are practically a marsh or swamp. Others are merely slow-flowing parts of a river or creek system while still others are ordinary lakes with an outlet. At the other extreme are dry lakes (playas), mostly found in the western deserts. Playas are terminal lakes which contain water at only a few times of the year— after local rains.

Another problem occurs in relation to variability of lakes: Lakes are subject to drainage and raising, or deepening, by reason of man's activities.

Because of this variability, no general rule can be established for lakes, any more than for rivers, as to an absolute test for navigability. Each lake must be separately considered.

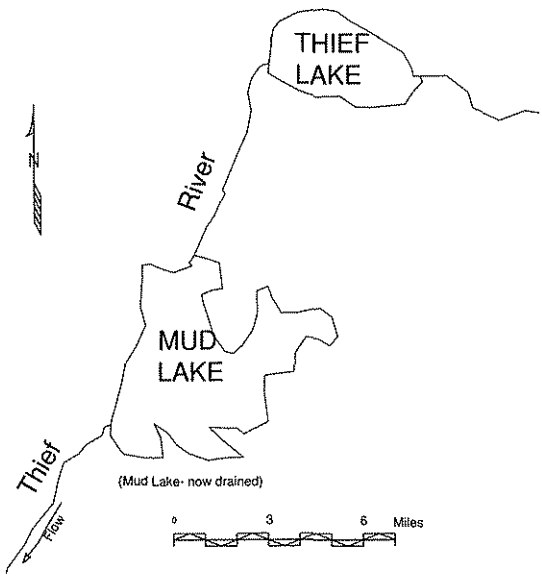
2-35 In general terms, the same rules set out by the Courts for rivers also apply to lakes.

CASE STUDY FOLLOWS

United States v. Holt State Bank, *270 U.S. 47, (1926)*

2-F.01 Mud Lake in Minnesota was claimed by the United States to have been a marsh covering some 5,000 acres at the date of Minnesota's statehood. The United States claimed that the General Land Office surveyors should have extended the survey across the "lake", breaking it up into sections for sale. This case is helpful in determination of navigability of a lake which had been drained or was difficult to navigate at time of statehood.

2-F.02 The Court found that in its natural condition the lake area was traversed by Mud River, a tributary of the Thief River, a navigable river leading into Canada.



Mud Lake Vicinity.

2-F.03 Mud Lake was formerly part of Red Lake Indian Reservation for Chippewa Indians. Most of the reservation was ceded back to the United States and surveyed for sale after classification as "agricultural" lands or "pine" lands.

2-F.04 After classification and sale, patents around Mud Lake were issued.

2-F.05 Under a combination of federal and Minnesota laws, a project to drain the lake was undertaken. By 1912 it was completely drained by a ditch which passed through the "lake" and emptied into the Thief River. The United States proposed to survey the former lake bed and sell the land for the benefit of the Chippewa Tribe.

2-F.06 The State claimed the lake had been navigable and that it had become owner of the now-drained lake bed. Because Minne-

sota had granted the beds of navigable waters to the adjacent upland owners, the state claimed that the surrounding patented land owners became owners of the lake bed.

2-F.07 The State Courts using Minnesota law standards found for the defendant, Holt State Bank, on the basis that the lake had been navigable. The United States appealed.

2-F.08 From the U.S. Supreme Court Decision,

"Navigability, when asserted as the basis of a right arising under the Constitution of the United States, is necessarily a question of federal law..."

and farther down,

"But notwithstanding the error below in accepting a wrong standard of navigability, the findings must stand if the record shows that according to the right standard the lake was navigable."

2-F.09 Although lengthy, the Court's description of the river conditions is worthy of study and it follows:

"In its natural and ordinary condition the lake was from 3 to 6 feet deep. When meandered in 1892, and when first known by some of the witnesses, it was an open body of clear water. Mud River traversed it in such way that it might well be characterized as an enlarged section of that stream. Early visitors and settlers in that vicinity used the river and lake as a route of travel, employing the small boats of the period for the purpose. The country about had been part of the bed of the glacial Lake Agassiz and was still swampy, so that waterways were the only dependable routes for trade and travel. Mud River, after passing through the lake, connected at Thief River with a navigable route extending westward to the Red River of the North and then northward into the British possessions. Merchants in the settlements at Liner and Grygla, which were several miles up Mud river from the lake, used the river and lake in sending for and bringing in their supplies. True, the navigation was limited but this was because trade and travel in that vicinity were limited. In seasons of great drought there was difficulty in getting boats up the river and through the lake, but this was exceptional, the usual conditions being as just stated. Sand bars in some parts of the lake prevented boats from moving readily all over it, but the bars could be avoided by keeping the boats in the deeper parts or channels. Some years after the lake was meandered, vegetation such as grows in water got a footing in the lake and gradually came to impede the movement of boats at the end of each growing season, but offered little interference at other times. Gasolene motor boats were used in surveying and marking the line of the intended ditch through the lake, and the ditch was excavated with floating dredges.

"Our conclusion is that the evidence requires a finding that the lake was navigable..."

2-F.10 The final conclusion that the ditch was excavated with floating dredges may not necessarily be a valid indicator. See *U.S. v. Crow, Pope & Land Enterprises, Inc.* 340 F.Supp. 25 (1972) where the "isolated example of a gold dredging barge for a few miles, primarily along his own property, to extract gold-bearing silt from the river bed was insufficient to demonstrate navigability."

State of Alaska v. United States, *563 F.Supp. 1223 (1983)*

2-G.01 The United States issued a conveyance (similar to a patent) to a native corporation for the bed of a small (20 to 80 acre) lake in southern Alaska, contending Slopbucket Lake was nonnavigable. The State of Alaska disputed the action.

This case helps to determine navigability where modern methods of transportation at statehood are claimed. The modern methods would apply to Alaska and Hawaii.

2-G.02 The state claimed the lake had been used for landing and takeoff of floatplanes before the time of Alaska's statehood and that the floatplanes were part of a highway of commerce. They further claimed that mode of transport in commerce was customary in Alaska.

2-G.03 Slopbucket Lake got its name from a work crew who camped on a small bar between Iliamna Lake and the smaller lake to the north. The crew drew their drinking water from the larger lake and emptied their slopbuckets into the smaller lake. They always referred to the smaller lake as Slopbucket Lake which had not been named at that time. The name stuck.

2-G.04 The District Court found that the primary floatplane activity in commerce was in the air and not on the water. Floatplanes were held not to be a mode of transportation on water for the purposes of determining navigability for title under the state's waters test. Thus, the bed of the lake was not owned by the State of Alaska.

END CASE STUDY

Watercraft Improvements and Navigability Tests

2-36 At one time it was proposed that the test for navigability should be framed such that if a water body could not be navigated by sail or by steam vessels, it should be nonnavigable. The courts have not chosen to include such a test. At least not formally, anyway.

The susceptibility of a particular watercourse to travel in trade or commerce naturally involves the type of watercraft available. For instance, had jet boat drives been available in the early days of river boating, much longer reaches of rivers such as the Yellowstone, the Feather, the Rio Grande and the Chattahoochee would now be considered navigable. Therefore the *susceptibility* of a stream, considered today, would be different.

Probably the State of Alaska, whose statehood occurred after the invention of jet driven boats, is the most important locale for such consideration.

Whenever a judgment is required as to whether a particular stream was navigable or not, there must be some threshold of boat size, type, draft or capacity that was (or could have been) used in commerce. Obviously if a small stream is under consideration this size-of-boat question would be of high importance.

2-37 The value of any given boat's use in commerce will have to be judged as of the time of statehood.

2-38 The U.S. Supreme Court, in *Jones v. Soulard,* 24 How. 41 (1860) cited arguments relating to this problem as follows:

"Improvements in the structure of boats and in the mode of propelling them may render streams, now wholly incapable of serving any commercial purpose, available for the carrying on of a most valuable trade by water. Let this marine commerce spring up, and the protection which the admiralty jurisdiction of the United States can give must accompany it. But shall the title to land adjacent to our streams which may thus become navigable, in fact, be affected by the discovery of improved methods of navigation?" The Court did not answer its own question directly but implied that there would be no effect on land titles.

Navigability for Title Versus Commerce Clause Usage

2-39 Possibly more of a legal problem than a surveying problem is the difference between navigability as applied to land *title* and as applied to commerce clause usage and federal jurisdiction problems arising therefrom. Nevertheless, the surveyor can be involved in either problem.

2-40 Commerce clause usage comes into play where land is condemned for navigational improvements, where wetlands are involved or where any federal law or regulation depends on navigability for its application.

The most obvious distinction relates to the *interstate* character of the commerce.

It often happens that the surveyor is the "legman" in gathering information regarding navigability, so that any interstate character of commerce is necessarily involved in any investigation.

2-41 The determination of navigability is a federal question. But where title to the bed is concerned, once navigability is determined, the question of bed ownership among private owners within a state becomes a question of state law, unless overriding federal considerations are present. The navigability for title purposes, as a federal question, however does not include the requirement that the commerce be interstate in character.

Exceptions to State Ownership of the Beds

2-42 While this subject is not strictly one of a navigability test, it is well to mention that under some conditions the Courts have found that title to the beds of navigable waters did not pass to the states upon statehood.

Because Congress has the power to grant lands under the navigable waters and where the grant is held to be in the exercise of congressional authority, grants of the beds have been recognized to Indian Tribes— by way of treaties for instance. Whenever Indian boundaries are involved there is a whole branch of law—Indian law—that may apply. The subject is beyond the present scope of this work.

Navigability Reports

2-43 Typically, a navigability report is occasioned because a question arose regarding a particular part of a river. It may also involve a question as to whether a single lake or a chain of lakes is navigable.

In practice, the professional is generally hired with the client's desired result clearly understood. If the request for a report is in connection with litigation, one side generally wants to see a water body considered navigable and the other side wants to see it nonnavigable. If all sides agree, a report is hardly necessary except possibly as a formality to become part of a stipulation.

While the temptation to immediately work toward obtaining evidence to support the client's point of view is human, it may be entirely wrong. The better way is to wait until all the evidence available is on hand before making a decision one way or another.

A navigability report's purpose is to locate and present the facts, interpret the technical facts, and to express an opinion as to the navigable character of the water body.

Until the water body has been examined in the field, library research completed, and government agency information gathered, you are well advised to make only guarded statements.

2-44 The purpose of the navigability report is to:

1) Locate and present the facts affecting navigability.
2) Interpret those facts.
3) Prepare an opinion regarding navigability based on the facts. The opinion should consider the legal aspects as they appear.

The Report Is Not A Final Judgment. Somewhere along the line it will be subject to judicial review.

2-45 Contents of a navigability report should include the following:

1) Physical description of the present water body along with maps, hydrological information including upstream dams, river controls and information about pertinent watertable changes and diversions. Suitable and typical photographs of various parts of the water body are very helpful—especially if they are keyed to the maps.

2) A description of the water body at the time of statehood with maps and any available photographs or historical illustrations.

3) Historical evidence of use of the water body in commerce. The evidence should show any actual use, proposed uses that never materialized, the frequency of such uses and the purposes.

4) The susceptibility of the water body to navigation at or near the time of statehood should be considered. This may include a professional judgment as to the feasibility of improvements to aid in navigation—which should be based on an engineering study. Alternative methods of transportation should be examined and included in the study.

5) Present day uses of the water body for recreational or commercial pursuits.

6) Comparisons with similar water bodies that have been found navigable (or nonnavigable) by the courts.

7) An interpretation of the facts presented, including the relative weight recommended to be placed on the historical and other information.

8) An opinion as to whether the water body is navigable or nonnavigable. If at all possible this should be a black or white answer and not one that is hedged by conditions. If conditions seem to be present that would affect the final outcome, perhaps additional investigation or legal advice is needed to resolve the problem one way or another.

2-46 Although the opinion part of the contents is listed at the very end of the above list, it is recommended that the final opinion be expressed as a conclusion at the very beginning of the report so that the reader does not necessarily have to turn to the back of the report to find out which way your opinion reads. A proposed format is included below.

2-47 Suggested headings for reports of this type are, in order of appearance in the report:
Title Page
Table of Contents
Letter of Transmittal
Summary and Conclusions
Method of Conduct of the study
Results of the study (The facts found)
Analysis of Results
Reasons for Conclusions
Appendix—Maps and supporting data

2-48 Sources of information for a navigability report might include the following:

1) Archives— both the National Archives and State archives

2) Libraries and Special Collections

3) Court records of previous litigation—especially in admiralty

4) Land Commission decisions regarding navigability

5) Corps of Engineers determinations of navigability

6) Bureau of Reclamation studies

7) Census records dating to the time of statehood to show the *need* for commerce at the time

8) Local histories such as County Histories which are usually available in genealogical libraries

9) Interviews with knowledgeable local and regional "old timers"

10) U. S. Geological Survey Water Supply Papers for hydrological data

11) Field Examination

2-49 Information from the National Archives and Records Centers as well as regional and local libraries is an absolute must. Local libraries may have Serial Set Indexes which list various water bodies by name and refer the reader to House and Senate Documents of all descriptions. Very often the documents are themselves considering funds for improvements to navigation.

2-50 Costs associated with navigability report preparation and presentation are sometimes unbelievable.

Archives research is expensive, whether conducted by the surveyor/engineer or by a professional archivist. The combination of the technical expert and the professional archivist is much more effective but is even more extravagant.

No maximum is even attempted but as a minimum for a thorough navigability study the following estimate is offered in terms of days—not dollars:

Weather Working Days— not including travel

Preliminary coordination with attorneys	1
Site examination	2
Local and regional library research	4
National Archives research	4
Government Agencies—Corps. Engrs, USGS	3
Report compilation and preparation	5
Final review with attorneys	1
TOTAL	20

Bare bones estimate for a simple situation requiring a thorough report— 20 days.

Because of delays normally experienced in obtaining historical data and photographs, the elapsed time will be much longer than the twenty days shown here.

Costs of travel, meals and lodging for out of town research, copy charges and map purchases must be included in estimates.

2-51 Reports on more complex issues have incurred costs in the hundreds of thousands of dollars in my own knowledge. They have mostly involved extensive archival research.