

2010

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Recommended Citation

Craig H. Allen, *Taking Narrow Channel Collision Prevention Seriously to More Effectively Manage Marine Transportation System Risk*, 41 J. MAR. L. & COMM 1 (2010), <https://digitalcommons.law.uw.edu/faculty-articles/84>

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Taking Narrow Channel Collision Prevention Seriously To More Effectively Manage Marine Transportation System Risk

Craig H. Allen*

I INTRODUCTION

The U.S. National Strategy for the Marine Transportation System highlights the importance to the nation of maintaining an effective, efficient and safe Marine Transportation System (MTS).¹ That system comprises vessels, waterways, ports, intermodal connections, related infrastructure and the system's users. Within the vital waterways of the nation's MTS are some 25,000 miles of commercially navigable channels.² Some of those channels are gifts of nature. Others were wrested from nature by resourceful and determined engineers charged by Congress to support and facilitate the nation's security and maritime commerce.³ Many of those channels are narrow, forcing vessels into close and sometimes dangerous proximity. A group of experts recently sounded the alarm over a mounting problem within the navigable waterways of the United States. In an article subtitled "When Ships Get Too Big for their Ditches," the experts observed that, "for many years, the U.S. has been putting bigger and bigger ships (and more of them) into the same old ditches, digging them deeper but making them no wider."⁴

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¹U.S. Department of Transportation, National Strategy for the Marine Transportation System (July 10, 2008) [hereinafter "MTS Strategy"], available at www.cmts.gov.

²Committee on Marine Transportation System, Fact Sheet on the Marine Transportation System, available at <http://www.cmts.gov/docs/mtsfactsheet.pdf>.

³See generally National Research Council, Marine Board, *Dredging Coastal Ports: An Assessment of the Issues* (1985); National Research Council, Marine Board, *The Marine Transportation System and the Federal Role: Measuring Performance, Targeting Improvement—Special Report 279* (2004).

⁴William O. Gray, et al., *Channel Design and Vessel Maneuverability - Next Steps (When Ships Get Too Big for their Ditches)*, 40 *Marine Technology*, Apr. 1, 2003, at 93, available at <http://www.usna.edu/naoe/channel/final.pdf>.

For waterway stewards and risk managers who take narrow channel collision prevention seriously, the trends identified by the experts will present a daunting challenge in the coming years. The narrow channel rule has the potential to help manage those risks, but its potential has yet to be fully realized.

Rule 9 of the International Regulations for Preventing Collisions at Sea (COLREGS)⁵ and the U.S. Inland Navigation Rules⁶ prescribes a unique collision prevention scheme for “narrow channels and fairways.” When it applies, Rule 9 of these two sets of “rules of the road” imposes a number of distinct obligations on vessel operators. For Rule 9 or any other collision avoidance rule to be effective, however, mariners must know when and where the rule applies. Unnecessary risk is injected into a situation whenever the rules fail to provide the mariner with sufficient direction or guidance to determine which rules apply to any given situation. Ambiguity in the rule may result in the operators of approaching vessels coming to conflicting conclusions regarding the rule’s application or in delayed collision avoidance maneuvers while those operators negotiate a solution to what is otherwise a doubtful, and often a rapidly developing, situation.

With shrewd understatement, two of the world’s leading authorities on the rules of the road for preventing vessel collisions report that “the term ‘narrow channel’ is not easily defined.”⁷ Indeed, the international conference that drafted the 1972 COLREGS rejected a proposal to include a definition of “narrow channel”⁸ and the United States Congress simply ignored the matter. Perhaps, like “pornography,” another mixed question of law and fact, we should be content to know a narrow channel when we see one, even if

⁵International Regulations for Preventing Collisions at Sea, 1972, T.I.A.S. 8587, 28 U.S.T. 3459 [hereinafter “COLREGS”]. The 38 numbered rules comprising the COLREGS, often referred to as the “International Rules of the Road,” apply to all vessels upon the high seas and in all waters connected therewith navigable by seagoing vessels, except where an appropriate authority has promulgated special rules for roadsteads, harbors, rivers, lakes or inland waterways connected with the high seas and navigable by seagoing vessels. *Id.* art. 1.

⁶Inland Navigation Rules Act of 1980, Pub. L. No. 96-591, 94 Stat. 3415 (1980), 33 U.S.C. ch. 34. In accordance with COLREGS art. 1(b), the United States has promulgated these “Inland Navigation Rules” for certain waterways shoreward of the “demarcation lines” that divide waters covered by the “international rules” from those covered by the “inland rules.” See 33 C.F.R. pt. 80 (2009).

⁷A. Norman Cockcroft & Jan N. F. Lameijer, *A Guide to the Collision Avoidance Rules* 61 (6th ed. 2004).

⁸The omission was not a mere oversight. See Intergovernmental Maritime Consultative Organization (IMCO), Summary Record of Eighth Meeting of Committee I of the Conference on Revision of the International Regulations for Preventing Collisions at Sea, Oct. 10, 1972, Doc. CR/CONF/C.1/SR.8 (May 10, 1973), at 8 (reporting that, in response to a proposal by Indonesia to define the phrase “narrow channel,” delegates from Finland, the Federal Republic of Germany and the United States all objected that they preferred to leave the phrase undefined). The final Senate report on the Inland Navigation Rules Act of 1980 does not mention the issue. See S. Rep. No. 96-979 (1980), reprinted in 1980 U.S. Code Cong. & Admin. News 7068, 7077-78.

the rule drafters cannot define it for us.⁹ Many believe that mariners—and those who depend on mariners to prevent accidents on the nation’s waterways—deserve better. The U.S. National Transportation Safety Board (NTSB) agrees. In its investigation into a 1981 collision between two towboats, one of which concluded the inland rivers location fell within the narrow channel rule while the other concluded it did not, the Board reasoned that it does “operators little good to learn months after an accident that a court has ruled that a particular portion of a waterway, under a particular set of circumstances was or was not a ‘narrow channel’ under the rules, and that the narrow channel rule should or should not have been applied by the parties involved in the accident.”¹⁰

The U.S. Coast Guard concurred with the NTSB’s 1982 recommendation to provide more guidance, but it carefully qualified its concurrence. In a letter from the Coast Guard Commandant to the NTSB chair, the Coast Guard explained that “[to] define a ‘narrow channel’ so as to apply to all situations would be virtually impossible. It is possible, however, that the factors to be considered in determining when to apply the Rule can be bounded and broad guidance issued to mariners.”¹¹ More than twenty-five years later, no guidance listing the “factors” mariners should consider in determining which channels and fairways fall under Rule 9 has been issued. In fact, other than some early discussions among members of the former Rules of the Road Advisory Council between 1982 and 1984,¹² the issue received little attention until several concerned Coast Guard captains of the port took steps to designate certain waterways within their areas of responsibility as narrow channels or fairways for purposes of Rule 9. Partly in response to those developments and the concern that they “may require the Coast Guard to consider officially designating certain waters/waterways as narrow channels,” the Coast Guard brought the issue before the U.S. Navigation Safety Advisory Council (NAVSAC) in the spring of 2009.¹³ The Coast Guard’s

⁹See *Jacobellis v. Ohio*, 378 U.S. 184, 197 (1964) (Stewart, J., concurring) (while declining to define pornography, reporting that “I know it when I see it...”).

¹⁰National Transportation Safety Board (NTSB), *Collision of the U.S. Towboat M/V Bruce Brown and Tow with the U.S. Towboat M/V Fort Dearborn and Tow, Mile 677.6, Ohio River, Dec. 9, 1981*, Report NTSB-MAR-82-5 (Jun. 17, 1982) (NTSB Recommendation M-82-32). See also letter from Jim Burnett, NTSB Chairman, to Admiral James S. Gracey, Commandant of the Coast Guard, June 30, 1982 (copy on file with the author).

¹¹Letter from Admiral James S. Gracey, Commandant of the Coast Guard, to James E. Burnett, Jr., NTSB Chairman, Oct. 6, 1982 (copy on file with the author).

¹²The Rules of the Road Advisory Council (RORAC) was established by Congress in 1980 to provide advice to the Coast Guard. See *Inland Navigation Rules Act*, *supra*, note 6 § 5. Its charter was expanded and it was renamed the Navigation Safety Advisory Council (NAVSAC) in 1989. See *Coast Guard Authorization Act of 1989*, Pub. L. No. 101-225, § 105(a), 103 Stat. 1908 (1989), 33 U.S.C. § 2073 (2006).

¹³U.S. Coast Guard, NAVSAC Task Statement, Task 09-05 (copy on file with the author).

task statement asked NAVSAC to provide advice on whether there is a need to designate waterways as narrow channels and, if so, to identify criteria by which waterways can be so designated.¹⁴

This Article takes up that task, but does so by locating the narrow channel rule in the larger context of risk management in confined waters. It begins by examining the risks posed by vessel navigation in narrow channels and fairways in the United States and the risk management measures employed to eliminate or reduce those risks, including the narrow channel rule in the applicable rules of the road. The Article then identifies problems with the existing rule and examines several alternatives to address the problems. The Article concludes that mariners deserve clearer guidance on how to identify the waters where Rule 9 applies than they have so far been given. To provide the needed guidance, the Coast Guard should initiate rulemaking to formally designate waterways in the United States where Rule 9 applies. An easier, but less effective, alternative would be for the Coast Guard to publish a list of prior determinations on the status of U.S. waterways as narrow channels or fairways, together with a guidance document setting out specific criteria to apply in making determinations for waters not yet the subject of a determination.

II MANAGING NARROW CHANNEL RISKS: COLLISIONS, ALLISIONS AND GROUNDINGS

Although this Article is focused on the risk of collisions in narrow channels and fairways, that risk must be viewed in the larger context of risk management for the Marine Transportation System. The potential costs—human, environmental and financial—of an accident in restricted waters can be staggering. Collisions in narrow channels threaten not only the vessels, crews, passengers and cargoes involved; they might also pollute or obstruct the channel,¹⁵ perhaps closing a vital waterway to other marine traffic.¹⁶ At

¹⁴Id.

¹⁵Under the U.S. Supreme Court's rule in *Robins Dry Dock & Repair Co. v. Flint*, 275 U.S. 303, 1928 A.M.C. 61 (1927), those who suffer purely economic losses from such an incident will be barred from recovery. See, e.g., *Louisiana ex rel. Guste v. The Testbank*, 752 F.2d 1019, 1985 A.M.C. 1521 (5th Cir. 1985) (en banc) (denying compensation for purely economic losses caused by a collision in the Mississippi River Gulf Outlet channel, resulting in closure of fisheries for nearly one month), cert. denied, 477 U.S. 943 (1986).

¹⁶Following the collision between the *Zim Mexico III* and the *Lee III* on February 21, 2004, the critical Southwest Pass route into the lower Mississippi River was completely closed for five days and limited to one-way traffic for several more days, while salvors worked to remove the *Lee III* wreckage. See *Crash Closes Mississippi River Indefinitely*, USA Today, Feb. 22, 2004, available at http://www.usatoday.com/news/nation/2004-02-22-ships-collide_x.htm.

the same time, provident maritime risk managers would caution against overlooking the non-collision risks posed by vessel navigation in restricted waters in our examination of collision prevention rules. Allisions—essentially, collisions by vessels with fixed objects—and groundings also pose grave risks. For example, allisions involving the M/V *Summit Venture* with the Sunshine Skyway bridge in Tampa Bay, Florida, in 1980, the towboat *Mauvilla* and her barge flotilla with an Amtrak railroad bridge in Alabama, in 1993, the 2001 *Brown Water V* allision with the bridge leading to South Padre Island, Texas, and the towboat *Robert Y. Love* and her flotilla with the Interstate 40 bridge over the Arkansas River near Webber Falls, Oklahoma, in 2002, collectively resulted in over 100 fatalities and severe motor and rail traffic disruption while regionally critical bridges were rebuilt.¹⁷ America will not soon forget the 11 million gallon oil spill from the *Exxon Valdez* after the laden tanker strayed outside the Prince William Sound channel and grounded on Bligh Reef.¹⁸ In 1996, the tanker *Sea Empress* ran aground in the Milford Haven channel in England, spilling over 20 million gallons crude oil. That same year, the tanker *Julie N* allided with a bridge while transiting a Portland, Maine channel, spilling 180,000 gallons of heating oil into Casco Bay. These allision and grounding incidents remind us that collision prevention is only part of the overall maritime risk assessment and management challenge, and that collision prevention rules must be crafted in a way that does not unreasonably increase non-collision risks.¹⁹

¹⁷Thirty-five motorists and bus passengers were killed when the 580 foot long M/V *Summit Venture* rammed the Sunshine Skyway Bridge over Tampa Bay. In re Hercules Carriers, 566 F. Supp. 962, 1983 A.M.C. 2409 (M.D. Fl. 1983). Forty-seven passengers and crew on the Amtrak “Sunset Limited” train were killed when the tug *Mauvilla* (pushing six barges) struck the railroad bridge, knocking it out of alignment and resulting in the passenger train running off the bridge. In re Amtrak “Sunset Limited” Train Crash in Bayou Canot, Alabama, on September 22, 1993, 121 F. 3d 1421, 1997 A.M.C. 2962 (11th Cir. 1997). Fourteen motorists were killed when the towboat *Robert Y. Love* hit an Interstate 40 bridge near Webber Falls, Oklahoma, causing it to collapse into the Arkansas River. In re Magnolia Transp. Co., 366 F. 3d 1153, 2004 A.M.C. 1249 (10th Cir. 2004). Eight motorists were killed when one of the hopper barges under tow by the tug *Brown Water V* allided with the Queen Isabella Causeway Bridge leading to Padre Island, Texas. See U.S. Coast Guard, Formal Investigation into the Circumstances Surrounding the Allision between the Barge Tow of the MV Brown Water V and the Queen Isabella Causeway Bridge on September 15, 2001, in Port Isabel Texas, Resulting in Multiple Loss of Life, available at http://www.offsoundings.com/WEB%20PDF/MV_BROWN%20_WATER_V_v_CAUSEWAY.pdf.

¹⁸*Exxon Shipping Co. v. Baker*, 553 U.S. ___, 128 S. Ct. 2605, 2008 A.M.C. 1521 (2008).

¹⁹Risk analysts concede that the Marine Transportation System will never be risk free; the cost would be too great. As MIT researchers have pointed out, “[t]he challenge is not to minimize collisions. The challenge is to minimize the sum of the cost of collisions and the cost of preventing collisions . . .” John W. Devanney III, et al., *Tanker Spills, Collisions and Groundings*, Massachusetts Institute of Technology, Sea Grant Program, MIT Sea Grant Report No. 79-14, 1979, NTIS Doc. PB299204, at 2-14. Accord Guido Calabresi, *The Cost of Accidents: A Legal and Economic Analysis* ch. 3 (1970) (describing the goals and sub-goals of accident law).

A. Risk Assessment

Risk assessment is a systematic approach to risk identification, analysis and management.²⁰ Risk identification begins with an identification of the hazards posed by a particular activity. It then turns to an examination of historical accident data, which are used to estimate the probabilities of accidents resulting from those risks and the potential harm that would result.²¹ Risk management analysts then select and implement appropriate risk elimination and reduction measures. Marine risk management incorporates both internal measures undertaken by the party engaged in the activity creating the risk and external measures by others. Internal risk management measures can be voluntary or required by law. The nautical rules of the road, including the Rule 9 narrow channel rule, fall into the category of required internal risk management measures, the violation of which can lead to penalties and civil liability.

B. Narrow Channel Risks

The narrow channel rule can be viewed as an area-based collision prevention measure, directed at a particular constellation of risks. The drafters of the COLREGS and Inland Rules and their predecessors were apparently convinced that the ordinary rules applicable to non-narrow water bodies did not, by themselves, provide adequate protection against collision risks in narrow channels and fairways. They therefore inserted in the COLREGS and Inland Rules a special purpose rule to address the hazards unique to those channels and fairways.²² Any interpretation of this risk management

²⁰See generally International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA), *Guidelines on Risk Management* (Dec. 2000), at 19 ("areas needing control"), available at <http://www.iala-aism.org/web/pages/publications/docpdf/guidelines/GUIDELI11.pdf>.

²¹A study of four U.S. ports found that the probabilities of collisions and groundings among commercial vessels were nearly equal: one collision occurred in every 1,200 vessel transits and one grounding occurred in every 1,300 vessel transits. Hauke L. Kite-Powell, et al. *Formulation of a Model for Ship Transit Risk: Final Report*, Massachusetts Institute of Technology, Sea Grant Program, MIT Sea Grant Report No. 98-6, 1998, at 48. Tug and tow flotilla (called "barge trains" by the authors) accident rates were generally higher than the rates for self-propelled vessels. *Id.*

²²Some channels are so narrow they can only support one-way traffic. Under those circumstances, traffic must be separated by time rather than space. Other channels might be called "quasi one-way" waterways. These very narrow waterways permit vessels to pass each other, but are too narrow for application of a true "keep-to-starboard" approach. The "Panama Canal style" practice followed in these waters is sometimes described as the "Texas two-step" or "Texas chicken," in which vessels approaching head-on both stay near the channel centerline until quite close, and then turn to starboard for a port-to-port passage. The maneuver allows the vessels to make synergistic use of the hydrodynamic forces and pass each other without running aground on the channel's outer edges. See Gray, *supra* note [4] at 98; John Bloom, *Unsafe Harbor, Texas Monthly* (May 1979), at 82, 86; Nat'l Academy Press, *Proc. 23rd Am. Towing Tank Conf.* (Robert G. Latorre, ed. 1992), at 26. With the recent widening of the Houston Ship Channel from 400 to 530 feet and the addition of barge lanes, the "chicken" approach should be less common there.

rule should therefore begin with the nature of the risks posed by navigation in narrow channels and how the rule seeks to mitigate those risks.

The principal factors that distinguish narrow channels and fairways from other waterways are their physical characteristics and usage. The risks may be posed by narrow and shallow waterway geometry, blind bends, sharp turns, tide and river stage fluctuations, powerful and sometimes unpredictable currents and the forces of hydrodynamic interaction.²³ In congested waters, the number of encounters between vessels increases, requiring ships to pass frequently at close quarters. Additional risks may be posed by cross-channel and converging traffic patterns, bridges that are unsafely designed or negligently operated²⁴ and frequent dredging, fishing and barge fleeting operations in some areas. The growing number of vessels with drafts of 40 feet or more and beams of 100 and even 180 feet, together with the financial and environmental constraints on dredging channels to depths and widths adequate for safe navigation, likely means the problem will worsen.²⁵ The increasing presence of recreational boats, many of which are operated by persons unfamiliar with the collision regulations, and large and sometimes unwieldy tug and tow flotillas exacerbates the problems in some waterways.

Studies by the Massachusetts Institute of Technology (MIT) Sea Grant Program published in 1979²⁶ and 1996-1998²⁷ examined a number of physi-

²³The hydrodynamic forces of interest include bow cushion and bank suction between moving vessels and the banks or vertical "walls" of a box-shaped channel or canal caused by pressure differentials and similar pressure-induced interaction between two adjacent vessels moving relative to each other. Nat'l Imagery & Mapping Agency (NIMA), *The American Practical Navigator*, Pub. No. 9 (2002), at 121-22; Richard A. Cahill, *Collisions and Their Causes* 93 (3d ed. 2002).

²⁴A joint study by the American Waterways Operators and U.S. Coast Guard found that 34 percent of the bridge allisions that occurred between 1992 and 2001 took place at bridges that have been identified by the Coast Guard as obstructions to navigation and candidates for alteration or removal under the authority of the Truman-Hobbs Act. See Coast Guard-AWO Bridge Allision Work Group Report, May 21, 2003, available at http://www.uscg.mil/hq/cg5/cg5211/docs/BAWGfinal_report.pdf.

²⁵It is not clear whether the backlog in dredging is due to funding constraints. In 1986, Congress enacted the Harbor Maintenance Revenue Act of 1986, imposing an *ad valorem* tax on commercial imports and exports to defray the cost of dredging and port maintenance. See Water Resources Development Act of 1986, Pub. L. No. 99-662, tit. XIV, Nov. 17, 1986, 100 Stat. 4082, 4266, codified at 33 U.S.C. § 2238 & 26 U.S.C. § 4461. In 1998, the U.S. Supreme Court declared the Act's tax on exports unconstitutional. See *United States v. United States Shoe Corp.*, 523 U.S. 360, 1998 A.M.C. 1403 (1998) (explaining, however, that a user fee based on the value of services provided to a ship would not violate the Constitution). The tax continues to be collected on imports and on domestic cargo. The tax currently generates about \$1.4 billion a year for the Harbor Maintenance Trust Fund, but only about \$700 million is spent on harbor maintenance, resulting in a current surplus of \$4.7 billion in the fund. See Great Lakes Commission, *Resolution: Reform of the Harbor Maintenance Tax and Harbor Maintenance Trust Fund* adopted Feb. 24, 2009, available at <http://www.glc.org/about/resolutions/09/hmtf.html>.

²⁶Devaney, *supra* note 19. The 1979 study was funded in part by a grant from National Oceanic and Atmospheric Administration's (NOAA) Office of Sea Grant and was undertaken with the support of the U.S. Department of Transportation's Transportation Systems Center. *Id.* at I-a, II.

²⁷Kite-Powell, *supra* note 21. The three-year study was funded by MIT Sea Grant, the U.S. Coast Guard and the U.S. Army Corps of Engineers. *Id.* "Acknowledgments."

cal and human factors associated with vessel collisions and groundings.²⁸ Although neither study focused specifically on narrow channels or fairways, or attempted to assess the effectiveness of alternative collision prevention rule sets, the studies are exemplars of a reasoned approach to assessing and managing narrow channel risk factors. For example, employing a physical risk model grounded on Bayesian methodology,²⁹ the 1998 study concluded that casualties correlated with visibility conditions, the accuracy of navigation systems, vessel maneuverability and operator skills levels.³⁰ On the other hand, the accuracy or adequacy of data on water depths and the state of the tide were generally considered less of a factor.³¹ When used in conjunction with channel design considerations (discussed in Part III below) and restricted water collision case studies, the MIT reports provide a useful starting point for assessing narrow channel collision avoidance measures.

C. Risk Management Measures for Narrow Channels and Fairways

Recognizing that navigable waterways are an indispensable component of the U.S. Marine Transportation System, the federal government seeks to manage the risks in maritime operations in those waters through measures that include both services and regulatory requirements.³² Waterway services include the installation of visual aids to navigation, like buoys and light-houses; the Differential Global Positioning Systems (DGPS); nautical publications and charts, including those adapted to Electronic Chart Display Information Systems (ECDIS); weather and hydrological data and forecasts, including in some ports the National Oceanic and Atmospheric Administration's (NOAA) Physical Oceanographic Real-Time System

²⁸In examining grounding incidents, the 1979 study distinguished ship navigation errors (believing the vessel is in one location when it is actually in another) from ship 'conning' errors (knowing the vessel's position but exercising poor judgment or skill in timing or executing a maneuver). Devaney, *supra*, note 19, at 3-5.

²⁹The model estimates the conditional probability of a collision or grounding given alternative values for selected variables, including operator skill and training, topographic and environmental difficulty of the transit, quality of operator's information and vessel maneuverability. Kite-Powell, *supra*, note 21 at 6-7.

³⁰*Id.* ch. 3 and pp. 48-49. Ship maneuverability is a function of several factors, including the vessel's length/beam ratio, number and size of rudders, power/tonnage ratio, windage and minimum bare steerage speed (which can be as high as 8 knots for some newer container ships). See generally Gray, *supra*, note 4 at 94; IMO, Standards for Ship Maneuverability, IMO Res. MSC.137(76) (Dec. 4, 2002), Annex 6.

³¹The 1996 Intertanko Port and Terminal Safety Initiative discussion paper was less sanguine about the adequacy and accuracy of hydrographic data in U.S. ports and harbors and the implications for ensuring minimum safe vessel under-keel clearance. For a summary of the papers, see William O. Gray, Intertanko's U.S. Ports and Terminals Safety Initiative (PTS): A Discussion Paper, available at <http://www.harbourmarine.com/news-articles/pdfs/01-029.pdf>.

³²See generally *The Marine Transportation System and the Federal Role*, *supra*, note 3, ch. 1.

(PORTS),³³ and vessel traffic management services. Where nature failed to provide navigable waterways that are deep enough, wide enough or straight enough to support the needs of commerce or national security, the government may also provide a variety of channel design, construction and maintenance activities, and in some areas, construct and operate dams and locks.³⁴ Services are seldom adequate by themselves to reduce risks to desired levels. Growing traffic volumes and trends toward larger, and in some cases less maneuverable, vessels strain the capacity of many U.S. waterways, both natural and designed,³⁵ requiring governments to prescribe regulatory measures to manage navigation risks.³⁶

Federal and state laws generally require certain vessels navigating in designated waters to embark local pilots³⁷ and to employ only “able seamen” for helm duties under some circumstances.³⁸ In U.S. navigable waters, the Navigation Safety Regulations (NSRs) prescribe detailed equipment and operating requirements.³⁹ The regulations require that tankers have two licensed deck officers on the bridge⁴⁰ and that the conning officer be familiar with the comparative proportions of the vessel and the channel, the tendency of the vessel to squat and the effect of reduced under-keel clearance on the vessel’s maneuverability.⁴¹ Channels and fairways may also fall with-

³³PORTS is a decision support tool that integrates real-time environmental observations, forecasts and other geospatial information. It measures and disseminates observations and predictions of water levels, currents, salinity, and meteorological parameters that mariners need to navigate safely. See National Oceanic and Atmospheric Administration (NOAA), Physical Oceanographic Real-Time System (PORTS), available at <http://tidesandcurrents.noaa.gov/ports.html>.

³⁴See John McPhee, *The Control of Nature* (1989) (giving a sense of the struggle between the U.S. Army Corps of Engineers (USACE) and the Mississippi-Atchafalaya River system, which began shortly after the War of 1812).

³⁵See Gray, *supra*, note 4, at 94-95.

³⁶Risk assessment and management analysts remind us that not every risk must be tolerated, nor must they be accommodated. Before we rush to further alter the nation’s waterways or rewrite the rules to adapt to new uses of the inland waterways we would do well to carefully consider the wisdom of accepting some risks. Not every channel should be navigated and not every vessel must be accommodated at every port. There is nothing inevitable about the arrival of ships with 50 foot drafts and 180 foot beams in all U.S. seaports, or of 1,200 foot towboat-barge combinations snaking their way through the sinuities of every inland river.

³⁷46 U.S.C. §§ 8501-8503 (2006).

³⁸See 46 U.S.C. § 8702(d) (2006), which requires an able seaman (not merely an “ordinary” seaman) on the helm on U.S. vessels of 100 or more gross tons in narrow or crowded waters during low visibility. The more demanding requirements for certification as an “able” seaman are set out in 46 C.F.R. § 12.05.

³⁹33 C.F.R. pt. 164 (2009). The NSRs are complemented by the STCW Convention and Code and several related resolutions by the IMO Assembly. See Convention on Standards of Training, Certification and Watchstanding of Seafarers [“STCW Convention”], Dec. 1, 1978, Sen. Exec. Doc. No. EE, 1361 U.N.T.S. 190; 1995 Amendments to the Annex of the Convention on Standards of Training, Certification and Watchkeeping for Seafarers, 1978, Sen. Exec. Doc. EE 96-1, C.T.I.A. No. 7624; IMO, Guidelines for Voyage Planning, IMO Res. A.893(21) (Nov. 25, 1999).

⁴⁰33 C.F.R. § 164.13(c) (2009).

⁴¹33 C.F.R. § 164.11(p) (2009).

in a traffic separation scheme or vessel traffic service, triggering additional requirements, and vessels may be required to maintain a listening watch on a radiotelephone frequency designated for bridge-to-bridge communications and to carry Automatic Identification System (AIS) transponders. The NSRs extend beyond deep-draft vessels. Following several high profile casualties involving tugs and tows, Congress and the Coast Guard prescribed a number of tug equipment, operations and operator training and qualification standards. Tugs must now be equipped with radar and AIS, and tug operators must be trained in their use.⁴²

D. The Narrow Channel or Fairway Rule

The modern narrow channel rule has its roots in the customary practices of mariners, local harbor regulations and early court decisions that incorporated the customs and local rules into the applicable standard of care, the breach of which constituted negligence.⁴³ Beginning in the late nineteenth century, the court-adopted rules were codified into statutes, treaties and regulations that were collectively referred to as the "rules of the road."⁴⁴ The current versions of the narrow channel rule is found in Rule 9 of the 1972 COLREGS, as amended, and in the 1980 Inland Rules, as amended.

Rule 9 responds to the collision risks unique to the world's increasingly challenged narrow waterways. Like internationally recognized Ships' Routing Systems⁴⁵ and Regulated Navigation Areas in the United

⁴²33 C.F.R. § 164.72 - .82 (2009).

⁴³The history of the narrow channel rule is detailed in John W. Griffin, *The American Law of Collision* § 36 (1949).

⁴⁴Early versions of the narrow channel rule were much shorter. The 1890 version of what was then Article 25 simply directed that "In narrow channels every steam vessel shall, when it is safe and practicable, keep to that side of the fairway or mid-channel which lies on the starboard side of such vessel." See Act of Aug. 19, 1890, ch. 802, § 1, art. 25, 26 Stat. 322, 327 (superseded). See also Raymond Farwell, *Nautical Rules of the Road* 309 (1941) (reprinting the rule). The 1948 version, now called "Rule" 25, substituted the phrase "power-driven vessel" for "steam vessel" and added a requirement for power-driven vessels to sound a whistle signal when approaching a bend and a duty for power-driven vessels of less than 65 feet not to hamper the safe passage of a vessel which can safely navigate only inside such channel. See Act of Oct. 11, 1951, ch. 495, Rule 25, 65 Stat. 408, 419 (superseded). See also Raymond Farwell & Alfred Prunski, *Nautical Rules of the Road* 412-13 (3d ed. 1954) (reprinting the rule). The 1960 rules added a note which, by implication, indicated that the narrow channel rule in Rule 25 applied in all conditions of visibility. See Pub. L. No. 88-131, Sept. 24, 1963, 77 Stat. 194, 205 (superseded). See also Alfred Prunski, *Farwell's Nautical Rules of the Road* 425 (4th ed. 1971) (reprinting 1960 International Rules, Part D "Preliminary" statement).

⁴⁵The IMO recognizes the following ships' routing systems: traffic separation schemes, separation zones or lines, traffic lanes, roundabouts, inshore traffic zones, two-way-routes, recommended tracks, deep water routes, precautionary areas, areas to be avoided, established direction of traffic flow and recommended direction of traffic flow. See Int'l Maritime Org., *Ships' Routing*, Foreword (9th ed. 2008). See also 33 C.F.R. § 167.5 (defining the terms under U.S. law).

States,⁴⁶ Rule 9 prescribes a rule set tailored to the unique risks in the “designated” areas, in the belief that the default rules applicable generally to other waterways do not, by themselves, provide an adequate level of safety.⁴⁷ Located in Subpart I of Part B of the COLREGS and Inland Rules, Rule 9 applies in all conditions of visibility.⁴⁸ In some respects, Rule 9 supplements the other steering and sailing rules by, for example, requiring certain vessels to keep to the starboard side of the channel. In other respects, Rule 9 displaces the generally applicable steering and sailing rules by requiring certain categories of vessels that might otherwise have a navigation priority under the rules to yield that priority to vessels that can safely navigate only in the channel. The Inland Rules version of the rule provides:

Inland Rule 9. Narrow Channels

(a) A vessel proceeding along the course of a narrow channel or fairway shall keep as near to the outer limit of the channel or fairway which lies on her starboard side as is safe and practicable. Notwithstanding paragraph (a)(i) and Rule 14 (a), a power-driven vessel operating in narrow channels or fairways on the Great Lakes, Western Rivers, or waters specified by the Secretary, and proceeding downbound with a current shall have the right-of-way over an upbound vessel, shall propose the manner and place of passage, and shall initiate the maneuvering signals prescribed by Rule 34(a)(i), as appropriate. The vessel proceeding upbound against the current shall hold as necessary to permit safe passing.

(b) A vessel of less than 20 meters in length or a sailing vessel shall not impede the passage of a vessel that can safely navigate only within a narrow channel or fairway.

⁴⁶U.S. Regulated Navigation Areas (RNAs) are promulgated under authority of the Ports and Waterways Safety Act. See 33 C.F.R. § 165.9(b) (2009). An RNA is a “water area within a defined boundary for which regulations for vessels navigating within the area have been established” under 33 C.F.R. pt. 165. See 33 C.F.R. § 165.10 (2009). The authority has been used quite broadly in some areas. For example, all of the navigable waters within the First Coast Guard District (the New England states) are deemed an RNA. See 33 C.F.R. § 165.100 (2009).

⁴⁷The corollary is that the Rule 9 scheme is not well suited for waters that are not narrow channels or fairways. The circumstances that render a waterway a narrow channel or fairway are the legally sufficient factual conditions for application of Rule 9 and therefore are not themselves “special circumstances” which might justify a departure of the rules under Rule 2(b).

⁴⁸Part B of the COLREGS and Inland Rules—the “steering and sailing rules”—is divided into three subparts: the rules in Subpart I apply to vessels in any conditions of visibility. Those in Subpart II apply only when vessels are in sight of one another. Subpart III applies to vessels in restricted visibility.

(c) A vessel engaged in fishing shall not impede the passage of any other vessel navigating within a narrow channel or fairway.

(d) A vessel shall not cross a narrow channel or fairway if such crossing impedes the passage of a vessel which can safely navigate only within that channel or fairway.⁴⁹ The latter vessel shall use the danger signal prescribed in Rule 34(d) if in doubt as to the intention of the crossing vessel.⁵⁰

(e) In a narrow channel or fairway when overtaking, the power-driven vessel intending to overtake another power-driven vessel shall indicate her intention by sounding the appropriate signal prescribed in Rule 34(c) and take steps to permit safe passing. The power-driven vessel being overtaken, if in agreement, shall sound the same signal and may, if specifically agreed to [,] take steps to permit safe passing. If in doubt she shall sound the danger signal prescribed in Rule 34(d) This Rule does not relieve the overtaking vessel of her obligation under Rule 13.⁵¹

(f) A vessel nearing a bend or an area of a narrow channel or fairway where other vessels may be obscured by an intervening obstruction shall navigate with particular alertness and caution and shall sound the appropriate signal prescribed in Rule 34(e).

(g) Every vessel shall, if the circumstances of the case permit, avoid anchoring in a narrow channel.

⁴⁹See also Inland Rule 15(b), which provides that on the Great Lakes, Western Rivers and waters designated by the Secretary, a power-driven vessel crossing a "river" shall keep out of the way of a power-driven vessel ascending or descending the "river." Rule 15(b) applies only to vessels on the listed waters and when the vessels are in sight of one another. Rule 15(b) applies only to power-driven vessels crossing a "river," which may or may not be a narrow channel and leaves out narrow channels and fairways not within a river. When it does apply, Rule 15(b) imposes a duty not merely to avoid impeding the other vessel, but to "keep out of the way."

⁵⁰In explaining Inland Rule 9, the Senate Committee on Commerce, Science and Transportation stated:

Rule 9(d) is similar to the 72 Colregs and is essentially a new rule in our inland waters. It will have wide application in harbor channels and river areas. It recognizes the problems experienced by mariners in narrow channels—currents, congestion, restricted maneuverability due to lower speeds, and other similar impediments. This "stay-clear commandment" for the crossing vessel is similar to the existing Western Rivers Rule 19, which is restricted to tugs with tows.

S. Rep. No. 96-979, Sept. 22, 1980, reprinted in 1980 U.S. Code & Cong. Admin News 7068, 7078. Congress's characterization of the duty not to impede as a "stay-clear commandment" acknowledges that the duty is more than merely a measure to prevent collisions. It imposes a requirement not to interfere with the navigation of the channel-bound vessel. The commandment can be violated even if no collision results from a failure to "stay clear."

⁵¹Although Rules 9(e) and 9(f) purport to apply in all conditions of visibility, maneuvering whistle signals are not sounded in restricted visibility when vessels are not in sight of one another. See Rule 34(a) of the COLREGS and Inland Rules.

Rule 9 does not by its terms legally require a vessel to follow a narrow channel or fairway. Vessels that do so, however, are instructed on how to behave in the channel. Rule 9 also gives such vessels a limited “priority” over crossing, fishing, sailing and small vessels. Where a conflict arises between application of Rule 9 and one of the situation-specific rules in Part B’s Subpart II or Subpart III, the rule makers sometimes subordinate one rule to another through the use of “notwithstanding” clauses.⁵²

The Rule 9 narrow channel or fairway rule is similar in some respects to Rule 10 applicable to Traffic Separation Schemes (TSS). Both apply to all vessels in all conditions of visibility. When they apply, both rules impose a number of obligations on vessels. However, in contrast to the narrow channel rule, the Rule 10 TSS rule is clear in its application: it applies to TSSs that have been pre-designated by a government authority and then published and charted.⁵³ The mariner is not left to come to his or her own conclusion on whether the waters do or do not fall within the ambit of Rule 10. Instead, the chart, coast pilot, sailing direction, port guide, VTS users’ guide or other publication will provide notice of the TSS designation.⁵⁴ By contrast, pre-designation of narrow channels or fairways where Rule 9 applies is the exception, not the rule.⁵⁵ For most of the 25,000 miles of commercially navigable channels in the United States, the mariner is left to determine which are narrow channels for purposes of Rule 9, and must do so without a definition or published criteria for making that determination.⁵⁶

1. What is a Narrow Channel or Fairway under Rule 9?

Rule 9 applies only in narrow channels or fairways.⁵⁷ However, neither the COLREGS nor the Inland Rules (nor their predecessors) define “narrow channel or fairway.” Courts faced with ascertaining the phrase’s meaning have held that whether a particular waterway is a narrow channel or fairway

⁵²See, e.g., COLREGS, supra note 6, Rule 13(a) (overtaking rule); see also id. Rule 18, *chapeau* (“[e]xcept where Rules 9, 10 and 13 otherwise provide . . .”). In the absence of specific internal guidance in the rules, conflicts may be resolved by application of the *lex specialis derogat legi generali* canon, which generally provides that in cases of conflict a specific rule (Rule 9) controls over a general rule.

⁵³See, e.g., COLREGS, supra, note 6, Rule 10(a).

⁵⁴TSSs adopted by the IMO are listed in the IMO’s Ships’ Routing publication. See supra, note 45.

⁵⁵In the United States, San Francisco Bay is a notable exception. See infra, note 164, and accompanying text.

⁵⁶The rules of the road provide definitions for everything from “restricted visibility” to a “vessel constrained by her draft,” and set out twelve factors for use by radar equipped vessels to determine “safe speed,” but they provide no similar help for the mariner in determining which waterways are narrow channels or fairways for purposes of applying Rule 9.

⁵⁷Whether the collision prevention scheme prescribed by Rule 9 could be incorporated by reference into a Regulated Navigation Area (RNA) even though the waterway where the RNA applies is not a narrow channel or fairway is discussed below. See infra, note 161 and accompanying text.

for purposes of applying the narrow channel rule is a mixed question of fact and law.⁵⁸ The Coast Guard applies the same “mixed question” test in mariner license suspension and revocation adjudications that involve alleged violations of Rule 9.⁵⁹ In making their waterway status determination, courts sometimes consider testimony by expert witnesses familiar with the actual use of the channel.⁶⁰

Mixed questions of fact and law are questions in which the facts are admitted or established by evidence, the rule of law is undisputed or determined and the issue is whether the facts satisfy the legal standard.⁶¹ Such questions frequently arise in collision litigation involving allegations of fault under the rules of the road.⁶² Because most collision cases are tried to the bench under the federal court’s admiralty jurisdiction, the legal, factual and mixed questions relevant to a “narrow channel” question would all be determined by the court. Where, however, the case is tried to a jury under the sav-

⁵⁸*Harbor Towing Corp. v. The Reliance*, 211 F. Supp. 896 (E.D. Va. 1963). Although courts are seldom explicit about how the burden of proof on a waterway’s status is allocated, the issue usually arises in collision litigation when one party asserts that the other party violated Rule 9 and that the violation constitutes causative fault. Under those circumstances, the party asserting the violation as the basis of a claim or defense would bear the burden of proving the waterway’s status by a preponderance of the evidence.

⁵⁹See, e.g., U.S. Coast Guard, Decision on Appeal No. 2519 (1991) (holding that a segment of the Colorado River in Arizona that was 150-200 feet wide was not a narrow channel, after explaining that the Rule 9 application question is decided by the “peculiar facts of each situation”). Coast Guard Commandant and Vice Commandant Decisions on Appeal are available through Westlaw (database: U.S. Federal Materials; Other Administrative and Executive Materials; Administrative Materials Organized by Area of Practice; Maritime Law).

⁶⁰The question falls within the provisions for expert testimony in Fed R. Evid. 702-705. Under Fed R. Evid. 704(a), the expert would not be barred from offering an opinion on the ultimate issue (i.e., “Is X a narrow channel or fairway?”). In the United Kingdom, the admiralty court may look to the advice of its nautical assessors. But see Ian P.A. Stitt, *The COLREGS—Time for a Rewrite?* 55 J. Nav. 419, 429 (2002) (concluding that such questions should be referred to a “panel of experienced mariners” rather than just two nautical assessors).

⁶¹*Pullman-Standard v. Swint*, 456 U.S. 273, 289 n.19, (1982). A lower court’s conclusions on questions of law are reviewed de novo by the appellate court, while the trial court’s findings of fact are reviewed under the “clearly erroneous” standard. See Fed. R. Civ. Pro. 52(a); *In re Luhr Bros., Inc.*, 325 F. 3d 681, 684, 2003 A.M.C. 1005 (5th Cir. 2003). The standard of review for mixed questions of law and fact has been the source of conflict in the circuit courts. The U.S. Supreme Court has held that “deferential review of mixed questions of law and fact is warranted when it appears that the district court is ‘better positioned’ than the appellate court to decide the issue in question or that probing appellate scrutiny will not contribute to the clarity of legal doctrine.” *Salve Regina College v. Russell*, 499 U.S. 225, 233 (1991) (citation omitted). But see *Luhr Bros.*, 325 F. 3d at 684 (“[w]e review legal conclusions and mixed questions of law and fact following a bench trial de novo”); *Campbell v. Merit Systems Protection Bd.*, 27 F. 3d 1560, 1565-67 (Fed. Cir. 1994) (explaining that policy alone determines where the court draws the line between deferential and de novo review).

⁶²Examples include: Was the vessel keeping a proper look-out under Rule 5? Was the vessel traveling at a “safe speed” under Rule 6? Was the vessel “restricted in her ability to maneuver” under Rule 3(g)? In contrast to the more general “narrow channel” question, the answer to each of these three questions turns on the particular vessel and circumstances involved.

ing-to-suitors provision,⁶³ factual and mixed questions are for the jury.⁶⁴ The legal rules applicable to the mixed question whether a waterway is a narrow channel or fairway for purposes of Rule 9 would be provided by the court's instructions, as they are for jury trials involving questions of negligence, unseaworthiness and proximate causation.⁶⁵

The U.S. Court of Appeals for the Ninth Circuit notes that the analysis of mixed questions of fact and law actually involve three distinct steps: (1) establishment of the basic, primary or historical facts, (2) determination of the applicable rule of law and (3) application of the law to the facts.⁶⁶ These three steps are cast in the form of the commonly used syllogism in Section II.A of this Article. Where the issue is whether a waterway is a narrow channel or fairway, the "rule of law" to be applied to the facts will be drawn from the treaty (for waterways falling under the COLREGS⁶⁷) or the statute (for Inland Rule waters). In either case, the meaning of the phrase "narrow channel or fairway" is a question of law and will be interpreted according to rules and canons applicable to legal texts and not those for rules of the common law.

⁶³The saving-to-suitors clause in 28 U.S.C. § 1333(1) "saves" to litigants in cases falling under federal admiralty jurisdiction "all other remedies to which they are otherwise entitled." Where a litigant's in personam admiralty claim falls within the concurrent jurisdiction of a state court or the diversity of citizenship or federal question jurisdiction of the federal district court, the claimant may obtain a jury trial. Additionally, Congress has provided a jury trial right for certain admiralty cases arising on the Great Lakes and their connecting waters. See 28 U.S.C. § 1873 (2006). The Seventh Amendment provides that "no fact tried by a jury shall be otherwise re-examined in any court of the United States, than according to the rules of the common law." U.S. Const. Amend. VII.

⁶⁴Given the specialized nature of the narrow channel inquiry and the admiralty courts' historically dominate role, the court might be justified in determining such questions even where other issues are tried to the jury. Cf. *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 388 (1996) (analyzing the respective roles of judge and jury in a patent infringement action and concluding that "when an issue 'falls somewhere between a pristine legal standard and a simple historical fact, the fact/law distinction at times has turned on a determination that, as a matter of sound administration of justice, one judicial actor is better positioned than another to decide the issue in question.'") (quoting *Miller v. Fenton*, 474 U.S. 104, 114 (1985)).

⁶⁵*Mamiye Bros. v. Barber S.S. Lines*, 360 F.2d 774, 777, 1966 A.M.C. 1165 (2d Cir.) (Friendly, J.) (explaining, in a cargo damage cases brought under the Carriage of Goods by Sea Act that, while negligence determinations must be characterized as a question of fact when tried to a jury, it is a question of law when tried to a judge, because in the latter case, there are no constitutional considerations to overcome concerns about uniformity of result), cert. denied, 385 U.S. 835 (1966).

⁶⁶*United States v. McConney*, 728 F.2d 1195, 1200-04 (9th Cir.) (en banc) (adopting a "functional analysis" for determining the standard of review for mixed questions of law and fact), cert. denied, 469 U.S. 824 (1984).

⁶⁷Where U.S. courts are applying COLREGS Rule 9 they must be mindful of the fact that the rule is part of a widely adopted international convention, the interpretation of which should be harmonized among the parties to the convention. Idiosyncratic local interpretations must be avoided, or uniformity and predictability under the COLREGS will suffer. *Garrett v. Higgenbotham*, 800 F.2d 1537, 1539 (11th Cir. 1986) ("courts ought to be extremely slow to tamper with this sensitive, regulatory system").

Whether interpreting the treaty (COLREGS) or the statute (the Inland Navigation Rules Act) to determine the governing rule of law, the first step is to determine whether the terms used have a plain or ordinary meaning. If they do, the court's obligation is to apply the statute as written by the legislature according to its terms.⁶⁸ Where, however, the terms are ambiguous or otherwise lack a plain or ordinary meaning,⁶⁹ the court must construe the terms before it can apply them to the facts of the case. The phrase "narrow channel or fairway" can be disaggregated in two different ways. The first would be to determine the individual meanings ascribed by the rule's drafters to the words "channel," "fairway" and "narrow." The second approach would be to take the term "narrow channel" as a single indivisible term thereby avoiding the need to separately define "channel" and "narrow." Under the second approach, the term "fairway" must still be defined and it must be further determined whether the adjective "narrow" also modifies the term fairway. The courts' narrow channel cases are not entirely consistent in their choice of approach or in distinguishing between channels and fairways.

The term "channel" by itself has several accepted meanings in marine navigation usage.⁷⁰ They include "the part of a body of water deep enough for navigation through an area otherwise not suitable" and "the deepest part of a stream, bay or strait, through which the main current flows." The definition adds that the channel is "usually marked by a single or double line of buoys⁷¹ and sometimes by ranges."⁷² However, the term is not limited to channels buoyed by the Coast Guard or maintained by the U.S. Army Corps of Engineers (USACE).

In determining whether a waterway is a narrow channel, the courts consider the waterway's physical characteristics and the dimensions of the ves-

⁶⁸*Caminetti v. United States*, 242 U.S. 470, 484 (1917) ("It is elementary that the meaning of a statute must, in the first instance, be sought in the language in which the act is framed, and if that is plain, and if the law is within the constitutional authority of the lawmaking body which passed it, the sole function of the courts is to enforce it according to its terms.") (citations omitted). See also Oliver W. Holmes Jr., *The Theory of Legal Interpretation*, 12 *Harv. L. Rev.* 417, 419 (1898-1899) ("We do not inquire what the legislature meant; we ask only what the statute means.").

⁶⁹The Court in *Caminetti* cautioned, however, that "[w]here the language is plain and admits of no more than one meaning, the duty of interpretation does not arise, and the rules which are to aid doubtful meanings need no discussion." 242 U.S. at 484. For additional views on statutory construction see Norman J. Singer, *Statutes and Statutory Construction* (6th ed. 2000) (multiple volumes); William N. Eskridge & Philip P. Frickey, *Statutory Interpretation as Practical Reasoning*, 42 *Stan. L. Rev.* 321, 351 (1990).

⁷⁰See *American Practical Navigator*, supra note 23, at 735 (Glossary).

⁷¹By "double line," the definition refers to the common U.S. practice of placing distinctively colored buoys on each side of many channels, with red buoys on the right side when entering from sea and green buoys on the left side.

⁷²"Range," in this application, refers to visual aids to navigation used by the mariner to determine when the vessel is in the center of the channel. See *American Practical Navigator*, supra note 23, at 64-65.

sels using the waterway.⁷³ In addition to the waterway's depth and width, the courts consider other risk factors, including the presence of dangers to navigation, currents and bends or turns.⁷⁴ Because the physical characteristics of both the waterway and the vessels using it are considered in determining whether a channel is a narrow channel, generalizations about what widths are considered "narrow" can be misleading. A channel of a certain width and depth might be deemed "narrow" when commonly used by deep draft merchant or naval vessels or large tug and barge flotillas,⁷⁵ but not when a channel of similar dimensions is used only by small fishing vessels or pleasure craft. By way of illustration, one court applied the narrow channel rule to a 2,000 foot wide waterway.⁷⁶ Courts have also held that certain named water bodies, like the Houston Ship Channel and San Francisco's Golden Gate, fall within the rule.⁷⁷

The test commonly applied by the courts to determine whether a waterway is a narrow channel also considers the character of the navigation use to which the waterway is put.⁷⁸ The rule has historically been limited to bodies of water customarily navigated by vessels traveling in opposite directions (i.e., two-way waterways).⁷⁹ Accordingly, turning basins and harbors where traffic commonly runs up, down and across the channel will likely not be subject to the narrow channel rule.⁸⁰ On the other hand, the presence of crossing traffic, even frequent crossing traffic, does not preclude a finding that a waterway qualifies as a narrow channel.

⁷³*Maritrans Operating Partners, L.P. v. The Faith I*, 800 F. Supp. 133, 140, 1993 A.M.C. 377 (D.N.J. 1992); *Williamson Leasing Co., Inc. v. American Commercial Lines, Inc.*, 616 F. Supp. 1330 (E.D. La. 1985).

⁷⁴*Weathers Towing, Inc. v. The Herman Pott*, 570 F.2d 1294, 1295-96 (5th Cir. 1978) (relevant circumstances considered by the court included the river stage, a strong current, the presence of a sandbar and fact that the channel curved 180 degrees at that location).

⁷⁵One collision case arose out of a meeting situation in the lower Mississippi River involving two tug and barge flotillas, one of which was 1,480 feet long and 140 feet wide, and the other was 1,269 feet long and 175 feet wide. See *Flowers Transp., Inc. v. American River Transp. Co.*, 485 F. Supp. 731, 1982 A.M.C. 2689 (N.D. Miss. 1980).

⁷⁶See *Prudential Lines, Inc. v. Transmaritima Sarda Italnavi Flotte Riunite S.p.A.*, 1981 A.M.C. 415 (S.D.N.Y. 1980) (applying narrow channel rule, without analysis, to a section of the Ambrose Channel that was 2,000 feet wide and 40 feet deep). Another court assumed, again without analysis, that Rule 9 applied in a collision between two towboats in a section of the Mississippi River where the navigation channel was 2,000 feet wide. See *Inland River Towing, Inc. v. American Commercial Barge Line Co.*, 143 F. Supp.2d 646, 2001 A.M.C. 2521 (N.D. Miss. 2000).

⁷⁷See, e.g., *Elcarriers, Inc. v. Embiricos*, 174 F. Supp. 929, 1959 A.M.C. 1782 (S.D.N.Y. 1959) (Houston Ship Channel is a narrow channel); *Luckenbach S.S. Co. v. Union Oil Co.*, 4 F.2d 551, 1924 A.M.C. 1212 (N.D. Cal. 1924) (the Golden Gate in San Francisco Bay is a narrow channel).

⁷⁸*Tempest v. United States*, 277 F. Supp. 59, 63, 1968 A.M.C. 926 (E.D. Va. 1967).

⁷⁹*Harbor Towing Corp. v. The Reliance*, 211 F. Supp. 896 (E.D. Va. 1963).

⁸⁰*Skibs A/S Siljestad v. Luckenbach S.S. Co.*, 215 F. Supp. 667, 681-83, 1963 A.M.C. 2280 (S.D.N.Y. 1963); *The No. 4—The C.W. Morse*, 161 F. 847 (2d Cir. 1908).

A “fairway” is defined in navigation circles as “the main thoroughfare of shipping in a harbor or channel” or “the middle of a channel.”⁸¹ For the mariner trying to interpret and apply Rule 9, those definitions are not very helpful. In truth, the terms “channel” and “fairway” overlap, and may even be used interchangeably, depending on regional custom and usage.⁸² In the United States, fairways are generally established by government authority.⁸³ In England, where a particular regulatory regime applies to a prescribed fairway within, but narrower than, a narrow channel, the two terms must be distinguished.⁸⁴ In Rule 9 cases, U.S. courts have determined that the adjective “narrow” modifies both channel and fairway. Thus Rule 9 applies only to narrow fairways, not all fairways. It is therefore important to distinguish fairways within the meaning of Rule 9 from offshore “safety fairways” prescribed in 33 C.F.R. part 166⁸⁵ or other regulatory fairways designated by the Coast Guard district commanders in 33 C.F.R. part 162.⁸⁶ Although some safety or regulatory fairways might meet the test of a “narrow fairway” under Rule 9, it is clear that some do not. For example, a two-mile-wide safety fairway in the Gulf of Mexico running between offshore oil and gas structures was held not to fall within the narrow channel rule, and vessels using this voluntary shipping lane do not acquire any special rights.⁸⁷

2. *The “Keep-to-Starboard” Rule*

The Rule 9 requirement for all vessels following the course of a narrow channel or fairway to “keep as near to the outer limit of the channel or fairway which lies on her starboard side as is safe and practicable” is one of the most important collision prevention measures in Rule 9. Its importance derives from its potential to eliminate or at least substantially reduce the incidence of “conflicting action” collisions between vessels meeting in narrow channels or fairways. Commenting on collision risk in narrow channels, a leading authority put it this way:

⁸¹American Practical Navigator, *supra*, note 23, at 761. Red and white vertically striped “fairway buoys” (also called mid-channel buoys) mark the fairway, indicating safe water on both sides of the buoy. *Id.*

⁸²The American Jurist—The Claycarrier, [1958] 1 Lloyd’s Rep. 423, 434 (Adm.), [1959] 2 Lloyd’s Rep. 53 (C.A.).

⁸³33 C.F.R. pts. 162, 166 (2009).

⁸⁴The Koningin Juliana, [1974] 2 Lloyd’s Rep. 353, 362 (C.A.).

⁸⁵See 33 C.F.R. § 166.105(a) (2009) (defining safety fairway).

⁸⁶See, e.g., 33 C.F.R. §§ 162.65, 162.75(b)(2), 162.90 (2009) (delegating authority to Coast Guard district commanders to designate fairways).

⁸⁷Zim Israel Nav. Co., Ltd. v. Special Carriers, Inc., 611 F. Supp. 581, 587, 1986 A.M.C. 2016 (E.D. La. 1985), modified, 800 F.2d 1392, 1988 A.M.C. 2110 (5th Cir. 1986). It should be noted that the Coast Guard had not exercised its authority under 33 U.S.C. § 1223(c)(5)(A) to declare that Rule 9 applied to the fairway.

One of the most dangerous situations that can confront a vessel is meeting another in a narrow channel. By definition, a narrow channel allows only a restricted amount of water in which to effect the meeting, so that the ships are not only thrust into close quarters but any deviation from the prescribed course can immediately place the vessels in extremis.⁸⁸

If vessels were left free to choose their lateral position in narrow channels and fairways, operators would find themselves unable to predict the relative position of oncoming vessels they “meet” in the channel (imagine the chaos on two-lane highways if cars were free to drive in either lane until they meet another car), particularly in channels where vision is obstructed by bends. The 1979 MIT study identified so many collision cases involving vessels approaching each other nearly end-on, but slightly to starboard (i.e., to the right) of each other, the researchers labeled the result of this dangerous scenario the “modal collision.”⁸⁹ Collision results under these circumstances when the operator of one vessel concludes in his or her mind that, although there is no risk of collision, just to be safe the operator should turn the vessel to port (i.e., to the left) to increase the starboard-to-starboard passing distance. The operator of the second vessel, concluding that risk of collision does in fact exist, follows the mandate of Rule 14 and turns to starboard (to the right) in order to pass safely port-to-port. The two conflicting turns nullify each other, resulting in collision.⁹⁰

When followed,⁹¹ the keep-to-starboard rule reduces the probability that vessels meeting in a narrow channel will find themselves in the “modal collision” approach. By keeping to the right side of the channel, the vessels should already be lined up to meet oncoming vessels port-to-port, as Rule 14

⁸⁸Cahill, *Collisions and Their Causes*, supra, note 23, at 79. Captain Cahill goes on to warn that hydrodynamic interaction is a constant threat in any head-on meeting in a narrow channel and that cross currents and sharp bends can accentuate the hazards. *Id.*

⁸⁹Devanney, supra, note 19, describes the modal collision (and then cites the 1956 Stockholm–Andrea Doria collision as an example):

Well over half of all collisions involve two ships in an end-on or nearly end-on encounter, proceeding at fairly substantial speeds in lousy visibility, aware of each other’s presence through radar, and maneuvering into a collision, often by one ship’s ‘reversing’ the Rules of the Road and the other not, and at the last moment throwing the throttle astern. This pattern occurs so often we will call it the most likely or modal collision.

Id. at 2-10. See also John W. Trimmer, *How to Avoid Huge Ships* 47 (labeling the situation the “dance of death”).

⁹⁰The 1979 MIT study concluded that the collisions resulted from a communication and coordination problem, not a detection problem. Devanney, supra, note 19, at 2-16. Without communication and coordination of collision avoidance actions, too many vessels approaching head-on took conflicting action.

⁹¹The predictability of the keep-to-starboard requirement is undermined by the point-bend custom and Rule 9(a)(ii), where they apply. Moreover, the rule is not practicable in the “quasi one-way” channels, where the only safe and practicable course is at or near the channel centerline. See supra, note 22 and accompanying text.

envisions (or, when not in sight, to avoid a turn to port for a vessel forward of her beam, as Rule 19(d)(i) provides).⁹² The rule requires vessels to “keep” to the starboard outer limit, not merely to move over after sighting approaching vessels or when they believe risk of collision exists.⁹³ At the same time, however, the “safe and practicable” qualification to the duty leaves some room for interpretation.⁹⁴ It should also be noted that even if a particular channel is held not to be a “narrow” channel under Rule 9, the Rule 2(a) “Rule of Good Seamanship” might be invoked to require vessels navigating within the channel to keep to the starboard side if safe and practicable.⁹⁵

3. *Priorities Among Vessels in Narrow Channels or Fairways*

Conflicting uses are common in congested waterways. Fishing, sailing and recreational vessels often vie with commercial traffic for the limited navigation space, and crossing vessels are a serious concern to vessels navigating narrow channels. Under the generally applicable steering and sailing rules applicable to vessels in sight, fishing and sailing vessels would be accorded a “priority”⁹⁶ over ordinary power-driven vessels.⁹⁷ Rule 9 of the COLREGS and Inland Rules effectively reverses that priority when the power-driven vessel is confined to a narrow channel. It does that through paragraphs 9(b), 9(c) and 9(d), which impose a “do not impede” risk management duty. Close inspection reveals a difference in wording between these three paragraphs in Rule 9. Paragraph (b) of Rule 9, which applies to vessels less than 20 meters in length and sailing vessels, is applicable only with respect to other vessels that “can safely navigate only within a narrow channel or fairway.” The same qualification is used in the rule on crossing traffic in Rule 9(d). By contrast, Rule

⁹²Rule 14 applies to vessels meeting head-on when in sight of one another. In times of restricted visibility, when the vessels are not in sight of one another, Rule 19 controls.

⁹³The *Mersey* No. 30, [1952] 2 Lloyd’s Rep. 183, 190 (Adm.).

⁹⁴See, e.g., *Linehan v. United States Lines, Inc.*, 1979 A.M.C. 1557 (3d Cir. 1977); *National Iranian Tanker Co. N.V. v. The Dalzell No. 2*, 411 F.2d 759, 1969 A.M.C. 1187 (2d Cir. 1969).

⁹⁵*Maritrans Operating Partners, L.P. v. The Faith I*, 800 F. Supp. 133, 140, 1993 A.M.C. 377 (D.N.J. 1992). While it may be good seamanship to keep to the right in waters supporting two-way traffic, it is doubtful that it is the ordinary practice of seamen (the language used in Rule 2(a) to “keep as near to the outer [starboard] limit” of such channels “as is safe and practicable” (as Rule 9(a) requires). Accordingly, Rule 9(a) imposes a more restrictive requirement than do the Rule 2(a) “good seamanship” cases.

⁹⁶The characterization of the relationship established by Rule 9 as a “priority” in the use of the channel instead of a “privilege” or a “right-of-way” is deliberate. Earlier versions of the rules classified vessels as “privileged” and “burdened.” Those terms have been replaced with “give-way” and “stand-on.” The rules are also very selective in their use of the phrase “right-of-way.” See, e.g., *Inland Rule 9(a)(ii)*.

⁹⁷The priority “hierarchy” for vessels in sight of one another is set out in Rule 18, which requires power-driven vessels to keep out of the way of sailing vessels and vessels engaged in fishing. However, the *chapeau* for Rule 18 subordinates that hierarchy to three other rules, by attaching the qualification “Except where Rules 9, 10 and 13 otherwise require...” Thus the priorities prescribed by Rule 9 displace those in Rule 18.

9(c), the rule applicable to vessels engaged in fishing, is broader. It extends the fishing vessel's obligation not to impede to "any other vessel navigating within a narrow channel or fairway."

When the rules impose a duty on one vessel not to impede the passage of another, the nature and extent of that duty is now set out in Rule 8(f). It states:

- (i) A vessel which, by any of these Rules, is required not to impede the passage or safe passage of another vessel shall, when required by the circumstances of the case, take early action to allow sufficient sea-room for the safe passage of the other vessel.
- (ii) A vessel required not to impede the passage or safe passage of another vessel is not relieved of this obligation if approaching the other vessel so as to involve risk of collision and shall, when taking action, have full regard to the action which may be required by the Rules of this Part.
- (iii) A vessel the passage of which is not to be impeded remains fully obliged to comply with the Rules of this Part when the two vessels are approaching one another so as to involve risk of collision.

The duties not to "impede" in Rules 9(b), 9(c) and 9(d) do not confer "right-of-way" status on the vessel following the channel. Rather, Rule 8(f)(i) requires the vessel which is directed not to impede another to take early action to ensure adequate sea-room for the other. Together, Rules 9 and 8(f) advise all mariners, whether operating large or small craft, that vessels navigating a narrow channel or fairway are legally deemed to be at a disadvantage, and that the navigational situation between them and less restricted vessels should be planned and executed so as not to impede the safe transit of the less maneuverable vessel within the channel. So far as practicable, the vessel directed not to impede the other must navigate in such a way as to avoid even the development of a risk of collision. In the end, if a situation develops so as to involve risk of collision, the vessel whose passage was not to be impeded must comply with the steering and sailing rules applicable to the particular approach situation; however, Rule 8(f)(ii) makes it clear that the encroaching vessel is not in any way relieved of her obligation not to impede the other.

In determining whether a given vessel "can safely navigate only within a narrow channel or fairway," it will be relevant whether she meets the definition in COLREGS Rule 3(h) for a vessel constrained by her draft and is displaying the appropriate lights or dayshape under Rule 28. It should be noted, however, that the lights and dayshape prescribed by Rule 28 are permissive,⁹⁸ and there is nothing in Rule 9 that indicates that the presence or

⁹⁸COLREGS Rule 28 states that such vessels "may" display the lights or dayshape designated in the rule.

absence of such distinctive marks is dispositive of the vessels' rights and obligations under Rule 9. Moreover, the COLREGS Rule 18 priority applies only when vessels are in sight of one another, and because the definition of a vessel "constrained by her draft" is broader than the class of vessels "which can safely navigate only within" the narrow channel, the presence of the identifying lights or dayshape should not be dispositive in Rule 9 determinations. There is no distinctive light or dayshape provision for vessels constrained by their draft in the U.S. Inland Rules, nor are such vessels accorded preferential treatment solely by virtue of Rule 18. Nevertheless, in waters governed by the U.S. Inland Rules, such a vessel may well qualify for preferential treatment under Rule 9(b) and 9(d).

III THE PROBLEM

If mariners—both professional and recreational—were asked to vote on which of the rules of the road is the most confusing and complex, Rule 9 would surely be at or near the top of the list.⁹⁹ Confusion begins with the uncertainty of its application. The NTSB's concern with the lack of a definition of "narrow channel or fairway" or formal criteria to assist the mariner in making such a determination is longstanding.¹⁰⁰ A response to its recommendation for an interpretive rule or some other guidance to help the "operator make the determination for himself and thereby assist him in applying the rules of the road"¹⁰¹ is overdue. A second problem in Rule 9 (and in Rule 10, among others) concerns the poorly understood and too often ignored duty on the part of some vessels not to impede the passage (or the "safe" passage) of another vessel, and how that duty applies once risk of collision between the vessels arises.¹⁰² This second problem is exacerbated in the waters falling under the Inland Rules by the absence of recognition for a "vessel constrained by her draft" in the Inland Rules.

⁹⁹Rule complexity and the potential for confusion can be "tested" in two ways. In the first, a typical mariner's comprehension of the text of the rule is assessed by written examination. The second assesses the typical mariner's ability to apply the rule correctly and in a reasonable amount of time in a variety of scenarios. In the author's experience, Rule 9 confusion is common in both assessments.

¹⁰⁰NTSB Recommendation M-82-32, *supra* note [10].

¹⁰¹*Id.*

¹⁰²See Stitt, *supra* note 60, at 421 (arguing that the duty not to impede should be replaced with a duty to "keep out of the way" of the other vessel).

A. *The Rule is Dangerously Uncertain in its Application*

The rules of the road incorporate situation-based rules (rules for meeting, crossing and overtaking approaches between vessels), environmental condition-based rules (rules applicable in conditions of restricted visibility), vessel condition-based rules (e.g., vessels restricted in their ability to maneuver or constrained by their draft) and area-based rules (Rules 9 and 10). An “area-based” risk management rule that fails to define the area to which it applies or to provide sufficient direction or guidance to operators to permit them to timely and accurately determine the areas of application creates two distinct dangers. The first is the danger that one or both of the operators on board the approaching vessels will err in applying or failing to apply the rule. The error may take the form of a “false positive” (concluding that the waters fall under Rule 9 when in fact they do not) or a “false negative” (concluding that the waters do not fall under Rule 9 when in fact they do). The NTSB investigation into a collision between two towboats on the Ohio River, one of which concluded the waterway was a narrow channel while the other came to the opposite conclusion, demonstrates one potential consequence of such rule ambiguity.¹⁰³ The second danger is that, even if both operators ultimately reach the correct conclusion, the need to make the case-by-case “*Does Rule 9 apply here?*” determination will increase the time necessary for the operators to make a collision prevention decision and then to execute that decision. The most obvious realization of either of these dangers will be a collision between the vessels. A lesser, but still important, risk to licensed mariners is the potential for official action against the mariner’s professional license for a mistaken application of Rule 9, even if the mistake does not lead to a collision.¹⁰⁴

The problem presented to a mariner, an enforcement agency or the courts faced with a Rule 9 applicability question can be brought into sharper focus by casting the decision process in the form of a syllogism that draws on the mixed fact-law approach introduced earlier and adds an unstated premise

¹⁰³See NTSB M/V Bruce Brown report, *supra*, note 10.

¹⁰⁴A U.S. mariner’s license may be suspended or revoked if the holder, while acting under authority of the license, violated a law or regulation intended to promote marine safety (such as the rules of the road) or committed an act of misconduct or negligence. See 46 U.S.C. § 7703 (2006). However, charging mariners for violating Rule 9 in waters that were not established as a “narrow channel or fairway” before the alleged violation occurred seems inconsistent with the spirit of due process, even though the constitutional “adequate notice” requirement strictly applies only in criminal cases. Cf. *Buckley v. Valeo*, 424 U.S. 1, 77 (1976) (“Due process requires that a criminal statute provide adequate notice to a person of ordinary intelligence that his contemplated conduct is illegal, for no man shall be held criminally responsible for conduct which he could not reasonably understand to be proscribed.”) (internal quotation marks and citations omitted).

regarding the purpose of the rule.¹⁰⁵ The components of the constructed syllogism are:

Major premise (implied, but unstated in Rule 9): the nature of the collision risks presented in a narrow channel or fairway require a special collision prevention rule.

Major premise (undefined by Rule 9): a narrow channel or fairway is a channel or fairway that has the following characteristics: 1, 2, 3... [Presently supplied by the courts].

Minor premise: Waterway X is characterized by the following relevant facts . . .

Conclusion: Therefore, Waterway X is/is not a narrow channel or fairway.

The importance of identifying the unstated major premise will not be lost on mariners, most of whom view the rules of the road through a functional lens. The more it appears to professional mariners that the narrow channel rule does not “fit” the waterway, the less likely they are to conclude on their own that the rule applies to that waterway. The “rule of law” in the major premise forms the basis for the court’s conclusions of law.¹⁰⁶ The narrow channel rule’s textual basis means that its interpretation will be governed by principles of treaty (COLREGS) or statutory (Inland Rules) interpretation. At the same time, the terms should be construed consistently with the unstated premise (the purpose behind the rule). The minor premise comprises the relevant characteristics of the waterway as established by the court’s findings of fact.¹⁰⁷ The conclusion, a mixed question of law and fact, follows when the facts found to have been established by the court satisfy or fail to satisfy the minimum necessary conditions prescribed by the rule.¹⁰⁸

B. The Rule 9 Duties “Not to Impede” Are Too Often Misunderstood and Ignored

The rule drafters who incorporated the duty not to impede in Rules 9(b), 9(c) and 9(d) are to be commended for their attempt to mitigate common and

¹⁰⁵See supra, note 66. Justice O.W. Holmes often referred to the “inarticulate major premise” in legal syllogisms. See Oliver W. Holmes Jr., *The Path of the Law*, 10 Harv. L. Rev. 457, 465 (1897) (“Behind the logical form lies a judgment as to the relative worth and importance of competing legislative grounds, often an inarticulate and unconscious judgment, it is true, and yet the very root and nerve of the whole proceeding.”). See also Holmes, *The Theory of Legal Interpretation*, supra, note 68, at 420 (“although practical men generally prefer to leave their major premises inarticulate, yet even for practical purposes theory generally turns out [to be] the most important thing in the end”).

¹⁰⁶A trial court’s conclusions of law are reviewed de novo. See supra, note 61.

¹⁰⁷In the bench trials common to admiralty, the court’s findings of fact will be set aside on appeal only if “clearly erroneous.” *Id.*

¹⁰⁸The standard of review on appeal for mixed questions of law and fact varies. *Id.*

dangerous navigational conflicts in narrow channels. However, few mariners believe those rules have been effective in achieving that goal, despite the later amendments to Rule 8 which sought to clarify the meaning of the duty.¹⁰⁹ After talking to “well over 1,000 masters and officers,” noted Australian rules of the road expert Captain Roger Syms concluded that the duty not to impede is neither understood nor heeded by the majority of operators.¹¹⁰ Problems in applying Rule 9(b) and 9(d) are even greater under the U.S. Inland Rules, which did not adopt the “vessel constrained by her draft” rule in the COLREGS, leaving even the conscientious mariner with no visual lights or dayshapes to signal that an approaching vessel can “safely navigate only in that channel.”

IV. ALTERNATIVE COURSES OF ACTION

At least five potential responses to Rule 9 ambiguity and uncertainty present themselves. The alternatives include the two extremes: (1) preservation of the status quo (i.e., doing nothing), and (2) taking steps to repeal Rule 9, thereby relegating collision prevention in narrow channels and fairways to the ordinary steering and sailing rules that govern other waters and obviating any waterway designations. Approaches that steer a more pragmatic and responsible course include (3) amending the rules to add a narrow channel definition, (4) formally designating waters where Rule 9 applies, as some Coast Guard sector commanders have already done, or (5) publishing a list of prior determinations on waterway status—much as the Coast Guard now does with “navigable waters of the United States” determinations—that will be presumptively valid in future cases involving questions regarding application of Rule 9 in those waters, together with a guidance document setting out specific factors to apply in making determinations for waters not yet the subject of a determination. After identifying the criteria that should be used in evaluating the alternative approaches, the following section examines the merits of and potential objections to the alternatives.

¹⁰⁹Rule 8(f) was added to the COLREGS in 1989 and to the Inland Rules in 1991. Earlier versions of the narrow channel rule directed smaller vessels not to “hamper” the safe passage of the channel-bound vessel. See *supra*, note 44.

¹¹⁰See Nautical Institute, Correspondence (by Roger Syms), *Seaways*, Jan. 2004, at 30. Recommendations to replace the duty not to impede with a requirement to keep clear assume that the latter duty will be more easily understood and complied with than the duty not to impede.

A. Criteria for Selecting Course of Action

This Article accepts the widely held view that the goals of the maritime risk management regime are to eliminate unnecessary risk, reduce the probability of, or potential losses posed by, risks that cannot be eliminated and allocate liability for accidents in a way that requires risk generators to internalize the cost of the accidents they cause.¹¹¹ A rule that purports to be tailored for collision avoidance in narrow channels or fairways must be responsive to the particular hazards posed by and to those waterways. The rule must be adapted and phrased in a way that serves its primary purpose of preventing collisions, not merely the secondary purpose of allocating liability for the collisions not prevented. At the same time, it must not unreasonably increase non-collision risks, such as groundings or allisions. The Rule 9 approach that best serves those goals is the preferred one. To determine which approach best serves those goals, alternative rule candidates should be tested to assess their relative effectiveness.¹¹²

The list of desirable and undesirable qualities of rules is potentially limitless; however, a few are worth singling out with respect to Rule 9. Collision prevention rules should be simple (easily comprehended) and clear in their application (unambiguous). Admittedly, these twin goals at times come into conflict. For example, to eliminate or reduce ambiguity and the danger of subjective or conflicting rule interpretations, rule drafters might feel compelled to add definitions and explanatory or qualifying clauses to what was otherwise a brief and simple rule, thus subordinating brevity to clarity. However, the increasing use of “plain language” in drafting federal rules and regulations provides numerous examples where the balance between simplicity and clarity has been struck effectively and prolixity was avoided.¹¹³

¹¹¹See *supra*, note 19 (the goal is to reduce the total cost of accidents and accident prevention). See also *supra*, note 36 (not all risks must be tolerated or accommodated).

¹¹²The earlier cited MIT studies employed the Bayesian method to assess the effect of various factors on the risk of vessel groundings or collisions. See *supra*, note 29 and accompanying text. The study method should be extended to assess the effect of alternative collision prevention rules (including repeal of Rule 9 and giving effect to the default steering and sailing rules) to determine which rule set best prevents collisions without unreasonably increasing the risk of other casualties, such as groundings or collisions. For example, the “keep-to-starboard” rule undoubtedly decreases the probability of ambiguous meeting situations that might lead to conflicting action and collision; however, by requiring the vessel to navigate well to the right of the channel center it might also increase the probability of grounding, allision with piers or lateral channel buoys and hydrodynamic interaction.

¹¹³See William J. Clinton, Presidential Memorandum of June 1, 1998—Plain Language in Government Writing, 63 Fed. Reg. 31,885 (June 1, 1998); Plain Language Action and Information Network, Plain Language: Improving Communication from the Federal Government to the Public, <http://www.plainlanguage.gov/index.cfm>. The 2007 changes to the Federal Rules of Civil Procedure by the Style Project authors sought to re-cast the 70 year old rules in order to make them clearer and easier to learn and apply.

Collision prevention rules should be drafted in a way that best promotes voluntary compliance and avoids the need for extensive at-sea enforcement to ensure the rules' effectiveness. Rules designed to guide action to prevent collisions should also provide predictability for vessel operators and keep the need for communication between the approaching vessels to a minimum. To achieve that, the rule must be drafted in terms that will maximize the probability that they will be interpreted and applied by both operators of the approaching vessels in the manner intended by the rule drafters. Said another way, the rule should be written such that the probability of misunderstanding, misinterpretation or misapplication by either vessel operator is minimized.¹¹⁴

Questions of practicality, feasibility and timing must be considered in choosing a course of action, particularly for any alternative that would require an amendment to one or both sets of rules. The COLREGS Convention makes provision for amendments to the convention's rules; however, the process and the need to build substantial support for any amendment require considerable time and effort.¹¹⁵ Although the Inland Rules will soon be subject to amendment by the Coast Guard through ordinary notice and comment rulemaking,¹¹⁶ practical considerations weigh against reliance on an alternative that would require resort to the dreadfully slow Coast Guard formal rulemaking process. It should also be recalled that Rule 1(b) of the COLREGS requires that any special local rules, such as the U.S. Inland Rules, must conform as closely as possible to the COLREGS rule. Additionally, the United States and Canada have acted to promote uniformity in the rules applicable on the Great Lakes by, among other things, adopting conforming versions of Rule 9 for those waters.¹¹⁷ Thus, any fur-

¹¹⁴Such errors may be a result of linguistic uncertainty or epistemic uncertainty. The former concerns uncertainty over the meaning of the rule while the latter refers to uncertainty in its application to the facts of the particular case. A rule which provides that all channels less than 600 feet wide from bank to bank are "narrow channels" suffers little or no linguistic uncertainty, but if the mariner has no way of determining the width of the channel epistemic uncertainty might frustrate application of the rule. A rule that categorically deems the Willamette River a narrow channel for purposes of Rule 9 avoids both uncertainties. With such a rule, mariners need not waste valuable decision time wondering whether the rule applies.

¹¹⁵An amendment to the COLREGS Convention must first be adopted by a two-thirds majority of those present and voting in the Maritime Safety Committee and then by the same two-thirds majority of the members of the IMO Assembly. The amendment then enters into force on the date specified by the Assembly unless more than one-third of the contracting States notify the IMO that they object to the amendment. See COLREGS Convention, *supra*, note 5, art. VI.

¹¹⁶The Inland Rules are presently codified in 33 U.S.C. ch. 34; however, in 2004 Congress authorized the secretary of the department in which the Coast Guard operates to "move" the rules from the U.S. Code to the Code of Federal Regulations. See Coast Guard and Maritime Transportation Act of 2004, Title III, § 303, Pub. L. No. 108-293, 118 Stat. 1028, codified at 33 U.S.C. § 2001 Note.

¹¹⁷See Canadian Modified Rule 9(k), Collision Regulations with Canadian Modifications, Consolidated Regulations of Canada (C.R.C), c. 1416, Schedule 1, available at <http://laws.justice.gc.ca/en/ShowFullDoc/cr/C.R.C.-c.1416/20090730/en>.

ther change to the text of the Inland Rules without a corresponding change to the analogous COLREGS rule must be evaluated in light of these international law and relations issues. Finally, regulators should always be circumspect in their approach to changes in long-established and widely applicable rules. Although any rule set should provide an orderly procedure for amendments to adapt to new risks or incorporate better risk management measures, frequent changes to the rules create confusion and should be avoided.

B. The Alternatives

Bearing in mind the problems with the existing regime identified above and the criteria for evaluating the alternative courses of action to remedy those problems, and convinced that doing nothing would be irresponsible, this Article now turns to an evaluation of the remaining four alternatives: repealing Rule 9, amending Rule 9, formally designating waterways where Rule 9 applies in the United States and publishing a list of prior "narrow channel" determinations, together with guidance designed to provide adequate basis for making narrow channel determinations for the waters not yet the subject of a determination.¹¹⁸

Alternative 1: Repeal Rule 9

At first blush, the "repeal Rule 9" alternative might seem too radical for serious consideration. For three reasons, however, this analysis begins with such a challenge to the very retention of Rule 9. The first reason is that a rational, though ultimately unpersuasive, argument can in fact be made for repeal of the rule, thereby relegating the confined waters collision prevention scheme to the default rules elsewhere in Subparts B.II and B.III of the COLREGS and Inland Rules.¹¹⁹ The second and more compelling reason is

¹¹⁸Not separately considered in this Article is the option of launching a more aggressive Rule 9 education and enforcement program. Even the clearest and wisest rule will not be effective if it is not complied with. Rules of the road examinations should emphasize the means for determining where Rule 9 applies. Potential violators should be reminded that proof that a vessel violated one of the Rule 9 prohibitions against impeding the passage of a vessel following a narrow channel may give rise to a presumption of causative fault under the rule of *The Pennsylvania* (86 U.S. (19 Wall.) 125, 1998 A.M.C. 1506 (1874)) and may provide grounds for administrative action against a professional mariner's license or for a civil penalty. 33 U.S.C. § 2072 (2006). Some cases may even rise to the level of grossly negligent navigation of a vessel in a manner that endangers life or limb, triggering possible criminal penalties. 46 U.S.C. § 2302(b) (2006).

¹¹⁹One justification for repealing Rule 9 is that a system with fewer rules generally promotes the goals of simplicity, clarity and predictability. Counter-arguments might be developed and tested through the kind of careful study of rule effectiveness advocated in note 112.

that only by carefully considering the collision prevention scheme *without* Rule 9 can the risk analyst appreciate the importance of the rule and the need to bring greater certainty and consistency to its application. Finally, such a “Rule 9 justification exercise” alerts the analyst to needed reforms in the rule.

Any proposal to repeal Rule 9 from the COLREGS or Inland Rules must carefully consider each of the rule’s elements and what they add to, or override in, the default collision prevention rules. Paragraph 9(a) of the rule carries forward the only duty prescribed by the original narrow channel rule¹²⁰ and establishes what many consider the most important obligation under the modern version of the rule: the “keep-to-starboard” requirement.¹²¹ To be sure, by taking the vessel off the channel range (if one is installed) and closer to the lateral buoy line, the bank or channel “wall” and piers, the requirement to keep to the starboard side of the channel does increase some navigational risks.¹²² But skeptics of the keep-to-starboard requirement of the narrow channel rule would do well to study Captain John Kemp’s analysis of the tragic collision between the *Bywell Castle* and the *Princess Alice* on London’s River Thames in 1878.¹²³ The collision occurred during a fifteen year period when the keep-to-starboard rule was not in force in England.¹²⁴ As a result, while the downbound *Bywell Castle* followed the former rule and kept to starboard (near the right descending river bank), the upbound *Princess Alice* was left apparently free to choose sides and elected to stay to that side of the channel on her port side (also the right descending side). As she rounded a bend, she unexpectedly encountered the *Bywell Castle*, resulting in the death of most of the *Princess Alice*’s 700 passengers. Although

¹²⁰As Griffin explains, early versions of the narrow channel rule “codified” the requirement for vessels to keep to starboard established by the courts as early as 1868. See Griffin, *supra* note _ at 88. In his Oliver Wendell Holmes Lectures advocating greater judicial freedom in interpreting statutes, particularly what he considers “obsolete” statutes, Judge Calabresi distinguishes between statutes that codify judge-made common law and those intended by the legislature to be primary sources of law. Guido Calabresi, *A Common Law for the Age of Statutes* 5 (1982). The narrow channel rule, which has its roots in judicially-adopted customs, falls mainly in the former category.

¹²¹The *British Patrol*, [1968] 1 Lloyd’s Rep. 118 (C.A.) (“I have always held the view, and I express it once again, that this is a most important rule which calls for strict observance on the part of vessels navigating in narrow waters”).

¹²²A vessel navigating near the bank or channel “walls” is more likely to encounter hydrodynamic interaction with the adjacent bank. That position also gives the vessel less time and room to maneuver for crossing traffic, barge fleeting operations and vessels getting underway from piers and wharves. See *supra*, note 112.

¹²³See John Kemp, *The COLREGS and the Princess Alice*, 61 J. Nav. 271 (2008).

¹²⁴In 1876, a Joint Committee of the Admiralty, the Board of Trade and Trinity House had recommended that the rule, which had been abolished in 1863, be reinstated. However, no action had been taken by 1878. *Id.* at 275.

Captain Kemp has criticized other aspects of the COLREGS, he concludes in his analysis of this incident that Rules 9 and 10, which reduce the probability of vessels meeting end-on, are of “great importance,” because they provide the physical separation necessary to avoid risk of collision.¹²⁵ Whether a Rule 2 based “good seamanship” requirement to keep to starboard (applied by some courts in non-narrow channels) would provide similar predictability in the absence of a positive Rule 9(a) requirement is doubtful. Therefore, broader and more certain application of Rule 9(a) should be promoted.

Alternative 2: Amend Rule 9

Rule 9 is too important to repeal and too uncertain in its application to leave as is. The uncertainty could be addressed by amending the rule to add a clear and workable definition of “narrow channel or fairway” or by making the rule applicable only in waters designated as a narrow channel or fairway by an appropriate authority (thereby requiring the further actions set out in the next section of this Article).¹²⁶ The two approaches could also be combined. The combined approach would align Rule 9 with Rule 10 for TSSs and other Ships’ Routing Systems, which rely on a brief definition, a designation approval process and public notice of the designation along with the nature of the measures applicable in the designated area. One drawback to an approach that requires prior designation is that Rule 9 would not apply in waterways that are obviously narrow channels but which have not yet been formally designated, whether through neglect, oversight or lack of resources. Amending the Rule to add a definition or to require prior designation also raises the rule amendment issues described in the previous section. Additionally, even proposals for minor amendments to the rules of the road raises the question of broader rule reform.

Proposals for reform of the collision prevention rules have spanned the spectrum from modest suggestions for clarifications and updates, to adapt to or incorporate new technologies, to calls for sweeping changes that challenge the very foundational precepts underlying the rules.¹²⁷ Others simply

¹²⁵*Id.* at 279-80. Predictable spatial separation is negated where customs like the point-bend custom followed in some sections at some times on the Mississippi River, override the keep-to-starboard rule.

¹²⁶A “narrow channel” definition developed by those with expertise in collision prevention would likely avoid the indeterminacy of the current multi-factor approach adopted by some courts that takes into account a variety of ephemeral circumstances and leads to the untenable situation in which a waterway is “narrow for me, but not for you,” or “narrow yesterday, but not today.” Cf. *Metropolitan Life Ins. Co. v. Glenn*, ___ U.S. ___, 128 S. Ct. 2343, 2357 (2008) (Scalia, J., dissenting) (criticizing other justices for their “fondness for a judge-liberating totality-of-the-circumstances ‘test.’”).

¹²⁷David Thomas, *The Fatal Flaw: Collision at Sea and the Failure of the Rules* (2001).

envision a diminished role for the collision prevention rules in the coming years. For example, some maritime risk analysts prophesy a coming shift to autonomous “software solutions” to collision avoidance that will augment or even supplant the human watchstander with computerized risk detection, analysis and decision making.¹²⁸ Those solutions might then be negotiated and implemented through digital ship-to-ship AIS exchanges in which one ship’s computer proposes and the other’s accepts a computer-selected collision avoidance solution, and then each communicates the agreed-upon solution to the vessel’s voyage planning program for implementation. A flashing indicator light might notify the watch officer that a “collision avoidance adjustment” to the voyage plan is being executed. Still another group of reformers would replace vessel-based planning and decision making with shoreside vessel control (which will also increasingly be automated), under the belief that error is less of a problem ashore than afloat. Whether such sweeping changes to risk management in restricted waters are practicable or likely is at present doubtful, and in any event they are too remote to address the immediate problems identified above.

a. Adding a Definition of “Narrow Channel or Fairway”

Assuming that, at least for the immediate future, collision prevention decisions will continue to be made by mariners, the rule set provided to those mariners for restricted waters operations can take several forms. Those forms generally fall somewhere in the continuum between clearly applicable rules that provide only one option and flexible standards that give wide discretion to the involved mariners to exercise their judgment on how best to avoid collision.¹²⁹ The former, “mechanical” rules provide the greatest predictability, but at the cost of flexibility. A requirement to sound a one second signal on the ship’s whistle before turning to starboard (Rule 34(a)) is a rule. A twelve-factor test for use by radar-equipped vessels to assess “safe speed” (Rule 6) is a standard. Although at very different positions on the “rule continuum,” these two rule examples share one thing in common: both are clear in when and where they apply. That distinguishes them from Rule 9.

¹²⁸Cf. Thomas Statheros, et al., *Autonomous Ship Collision Avoidance Navigation Concepts, Technologies and Techniques*, 61 J. Nav. 129, 137 (2008) (observing that, in preventing collisions, some such programs violate the COLREGS). The authors argue that the rules of the road have been laid down to minimize the subjective nature of humans; however, even if the rules were fully defined, human interpretation of them is still subjective since ship navigation maneuvers are performed in real-time and sometimes under demanding exogenous inputs. *Id.* at 130. “The subjective nature of humans can only be removed from ship navigation when humans are no longer responsible for ship navigation.” *Id.*

¹²⁹See Richard A. Posner, *Economic Analysis of Law* 555-56 (6th ed. 2003) (distinguishing between the construction and application of narrow, precise “rules” and broad, vague “standards”).

One or both rule sets could certainly be amended to add a definition of “narrow channels or fairways.”¹³⁰ The Coast Guard’s one-time objection that it would be “virtually impossible”¹³¹ to provide a general application definition of the term likely exaggerates the difficulty.¹³² Moreover, if that were true neither the agency nor the courts should expect mariners to step into the breach. But merely adding a “narrow channel” definition would not effectively solve the problem identified above. Any definition would still have to be applied by mariners on a case-by-case basis, when time, space and speed call for prompt and accurate decisions. The frequency and dangers of conflicting application of the new definition by two approaching vessels and the danger of delayed avoidance action might be diminished, but would not be eliminated by the new definition.

b. Amending Rule 9 so it Applies only to Designated Waterways

Amending Rule 9 so it applies only to designated waterways would align Rule 9 with the other area-based rules familiar to mariners, such as Rule 10 applicable to TSSs. However, in addition to the problems inherent in any amendment to the rules, this approach would not be effective until the designating authority completed the designation process. The new rule would effectively repeal the narrow channel rule until the designations were completed. Section III.B.3 more fully analyzes the arguments for and against prior designation of waterways as narrow channels and will not be repeated here. It should be noted, however, that the prior designation approach described in Alternative 3 below does not require that Rule 9 be amended so it applies only in previously designated waters. The designations described in Alternative 3 would supplement existing Rule 9 through a non-exhaustive list of waterways where Rule 9 has been deemed to apply. A waterway’s omission from the list would not necessarily mean that Rule 9 does not also apply to it.

c. Finishing the Task: Other Rule 9 Amendments

If Rule 9 is amended to either add a definition of narrow channel or fairway or to condition its application prior to designation of the waterway, the drafters might take advantage of the opportunity to address several other defects in the present rule.¹³³ The case for replacing the current Rule 9 duty

¹³⁰For examples of other area-based risk prevention schemes which demonstrate the feasibility of establishing workable definitions see 33 C.F.R. § 167.5.

¹³¹See *supra*, note 11 and accompanying text.

¹³²The Nautical Institute, Royal Institute of Navigation or U.S. Maritime Law Association might be appropriate and willing forums to develop or vet a definition for narrow channels and fairways.

¹³³A Rule 9 shorn of paragraphs 9(e) and 9(f) would certainly appeal to simplicity proponents, and would avoid the confusing suggestion that such maneuvering signals are sounded in restricted visibility (as their placement in the all-weather Rule 9 would suggest). See *supra*, note 51.

“not to impede” in paragraphs 9(b), 9(c) and 9(d) with a duty to “keep out the way” has been made by a number of experts.¹³⁴ Additionally, incorporating the “vessel constrained by her draft” rules into the Inland Rules would reduce some of the uncertainty in application of Inland Rule paragraphs 9(b) and 9(d). In drafting the Inland Navigation Rules Act of 1980, Congress rejected this part of the COLREGS for reasons that are not very persuasive. Congress explained:

The 72 Colregs Rule 18(d) directs vessels to avoid impeding a vessel “constrained by her draft” but does not assign a right-of-way to the constrained vessel. Such a subjective rule might lead to abuses and result in a situation wherein a vessel considering herself constrained by her draft claims a right-of-way to which she is not entitled, thereby creating a dangerous situation.¹³⁵

Experience has shown, however, that the same “subjective” determinations are made every day by vessels restricted in their ability to maneuver and not under command, without widespread outcries that the claim to status is being abused. On the other hand, two considerations argue in favor of incorporating the constrained-by-draft recognition. Without such recognition, the circumstances under which Rules 9(b) and 9(d) apply are much less predictable, undermining the effectiveness of this priority for channel-bound vessels. The omission also leaves the United States out of step with the COLREGS for reasons that do not appear to meet the strict standards for discrepant “local rules” set out by Rule 1(b) of the COLREGS.

Predictability is the key to the keep-to-starboard rule’s effectiveness. In a case decided before the 1972 COLREGS entered into force, the British courts emphasized that it was essential that the “keep-to-starboard rule” be applied uniformly to all ships navigating up and down the river, irrespective of their draft and the state of the tide.¹³⁶ In the United States, however, the predictability provided by the keep-to-starboard requirement in Rule 9 is undermined in some waterways by two common “exceptions.” First, in the lower Mississippi River, the point-bend custom recognizes the practice of vessels upbound against the river current taking the “points” in the river (as the *Princess Alice* attempted to do on the River Thames), while the downbound vessel takes the “bends.”¹³⁷ Under the second exception, found only in the Inland Rules, Rule 9(a)(ii) gives downbound power-driven vessels in narrow

¹³⁴This amendment would more closely align Rule 9 with Inland Rule 15(b), which uses the “keep out of the way” language. See *supra* note [49]. It would also be consistent with Congressional intent that Inland Rule 9(d) establishes a “stay-clear commandant.” See *supra*, note 50.

¹³⁵S. Rep. No. 96-979, reprinted in 1980 U.S. Code Cong. & Admin. & News at 7081.

¹³⁶The *Koningin Juliana*, [1973] 2 Lloyd’s Rep. 308 (Adm.), [1974] 2 Lloyd’s Rep. 353 (C.A.), [1975] 2 Lloyd’s Rep. 111 (H.L.).

¹³⁷Robert T. Lemon, *The Mississippi River ‘Point-Bend’ Custom*, 19 J. Mar. L. & Com. 373 (1988).

channels or fairways on the Great Lakes,¹³⁸ Western Rivers or waters designated by the secretary¹³⁹ the right of way, and allows the downbound vessel to propose the manner and place of passage. As a result, the downbound vessel might well not keep to the starboard side of the channel. Despite the damage these “exceptions” do to predictability, reformers must be mindful that one exception is entrenched in custom and the other codified in the Inland Rules, and any attempt to alter either would certainly be resisted.

Alternative 3: Formally Designate Waters Where Rule 9 Applies.

Even without a formal amendment to the rules, the Coast Guard could eliminate much of the present Rule 9 uncertainty through the exercise of its delegated rulemaking authority, to formally designate those waters and waterways the agency deems to be “narrow channels or fairways” for purposes of Rule 9. That was, in fact, the agency’s initial reaction to the 1982 NTSB recommendation.¹⁴⁰ An “interpretive ruling” drafted but never promulgated by the Coast Guard would have provided that “For the purposes of application of Rule 9(a)(ii) as it applies on the Western Rivers: The Western Rivers are defined to constitute a narrow channel and, as such, Rule 9(a)(ii) shall be applied where the passing situation described occurs anywhere on the Western Rivers.”¹⁴¹ The Coast Guard again raised the issue of formal designation with NAVSAC in 2009.

One Coast Guard commentator, writing in 1983, examined the formal designation approach in conjunction with two others.¹⁴² The three alternatives he identified to resolve the narrow channel definition problem included: provide “guidance” by publishing a summary of the factors the courts have considered and then continue to leave actual determinations up to the mariners;¹⁴³ designate certain portions or reaches of waterways as narrow

¹³⁸Canada has adopted a similar rule. See *supra*, note 117.

¹³⁹Those waters include the Tennessee-Tombigbee Waterway, Tombigbee River, Black Warrior River, Alabama River, Coosa River, Mobile River above Cochrane Bridge at St. Louis Point, Flint River, Chattahoochee River, and Apalachicola River above its confluence with the Jackson River. See 33 C.F.R. § 89.25 (2008).

¹⁴⁰See *supra*, note 11.

¹⁴¹U.S. Coast Guard, Draft Interpretive Ruling for Application of Rule 9(a)(ii) (undated) (copy on file with the author). The cases setting out the legal test for determining whether a waterway is a narrow channel have treated that test as trans-substantive. That is, the legal test does not vary in its application from one component paragraph of Rule 9 to another, as it might under a *dépeçage* approach. Thus, a waterway that qualifies as a narrow channel for purposes of applying the keep-to-starboard requirement would also be a narrow channel for purposes of applying the vessel priorities.

¹⁴²William B. Thomas, *How Narrow is a Narrow Channel?* 14 J. Mar. L. & Comm. 537 (1983).

¹⁴³Commander Thomas was skeptical that this approach would help, given that even after a collision the experts, who have months to examine the issue, are often unable to agree on whether the waters constituted a narrow channel or fairway. *Id.* at 555. That disagreement may simply be a product of our adversarial “expert” system.

channels and indicate their status on charts;¹⁴⁴ or designate an entire waterway system as a narrow channel.¹⁴⁵ The first approach will be taken up in section III.B.3 of this Article. The second and third approaches are considered together in this section. By relying on formal designation, those latter two approaches would more closely align the rule for narrow channels and fairways with Rule 10 for TSSs. The distinction between the latter two approaches he identified highlights the fact Rule 9 designations must recognize that a waterway might be “narrow” in some segments or reaches, but is not necessarily narrow throughout its range. For example, in an early case arising on the Columbia River (which flows over 1,200 miles from its Canadian headwaters and through Washington and Oregon on its way to the Pacific Ocean), the federal district court held only that specified reaches of the river fall within the narrow channel rule.¹⁴⁶ On the other hand, the Willamette River, which flows into the Columbia near Portland, Oregon, was held by another court to be a narrow channel without qualification as to any particular river mile or section.¹⁴⁷

a. Objections to Narrow Channel Designations

Possible objections to a proposal to formally designate waters or waterways as “narrow channels or fairways” for purposes of applying Rule 9 include insufficient justification, lack of authority or legitimacy, impracticality and lack of resources to carry out the task. Those who argue against designation point out that the United States has some 25,000 miles of commercially navigable channels, rendering the task of measuring, assessing and designating those that fall under the narrow channel rule impossibly difficult. Moreover, if regulatory authorities designate any waterways as narrow channels and fairways, they must designate all of them, or mariners will be misled into believing that those waterways not so designated do not fall within the rule.

¹⁴⁴This second alternative has the advantage of being closely tailored to actual waterway conditions, but would require mariners transiting long waterways to be constantly mindful of which segments were narrow channels and which were not. *Id.*

¹⁴⁵The third alternative has the advantage of certainty, simplicity and predictability. However, it would conflict with the point-bend custom where and when the custom applies. *Id.* at 556-59.

¹⁴⁶*The Cascades*, 178 F. 726, 731 (D. Or. 1910) (holding that “[t]he Columbia river in the vicinity of the place where the collision occurred must be held to be a narrow channel, which is subject to the regulation of article 25 of the Inland Navigation Rules, requiring steam vessels, when safe and practicable, to keep to the side of the fairway which lies on the starboard side.”) (emphasis added and citations omitted).

¹⁴⁷*American-Hawaiian S.S. Co. (The Pennsylvanian) v. Western Transp. Co.*, 139 F.2d 478, 480-81, 1943 A.M.C. 1330 (9th Cir. 1943) (“the Willamette River channel must be regarded as a narrow one” and adding that “[t]he evidence establishes that it was a common practice for river boats to use the eastern side of the river. However, proof of custom or convenience alone will not justify an infringement of the narrow channel rule”).

There is no easy answer to the resource constraint question. At the same time, much of the background work necessary for the designations has already been completed by the courts and agencies. In response to the “insufficient justification” objection, a strong “justification” case can be made that published designations would provide much needed clarity and predictability in the rule’s application; thereby reducing collision risks, and would be unlikely to increase any aspect of that risk. As to the possible authority and legitimacy objections, the following section will demonstrate that the Coast Guard has ample authority for making such designations, particularly in Inland Rule waters. Opponents might also be asked why it would be more legitimate or effective in their mind to leave it to hundreds of individual mariners to make the decision on the rule’s application rather than the government agencies and MTS stakeholders.¹⁴⁸ The last objection, that if any waters are designated all qualifying waters must be designated, to avoid confusion, is easily disposed of. The argument loosely rests on the canon of statutory construction *expressio unius est exclusio alterius* (the express mention of one thing impliedly excludes all others). The canon does not apply, however, where the enumeration or list is expressly qualified as non-exclusive or non-exhaustive.¹⁴⁹

Despite the objections, the case for pre-designating narrow channels or fairways is quite strong. The paramount purpose of Rule 9 is the regulation of primary conduct by mariners, not secondary liability determinations.¹⁵⁰ The effectiveness of Rule 9 as a collision prevention measure depends far more on voluntary compliance than on deterrence, enforcement or collision liability litigation. In the absence of reliable and accessible advance notice of where the rule applies, even the most compliance minded mariner may reach the wrong conclusion or at the very least suffer unnecessary delays in taking collision avoidance action while processing and analyzing the information relevant to the waterway’s status.

b. The Authority to Designate Waters as Narrow Channels

Any formal designation of waters as “narrow channels or fairways” must be grounded in legal authority for such designations. Looking first at the

¹⁴⁸It will be recalled that in the United Kingdom, admiralty courts may receive advice from the nautical assessors on whether a waterway is a narrow channel or fairway. See *supra*, note 59. In the United States, courts may consider expert testimony on the question. *Id.*

¹⁴⁹Mindful of the need for qualification, the Captain of the Port for San Francisco designated a number of “narrow channels or fairways”, while cautioning that “this list is not all-inclusive.” See *infra*, note 164 and accompanying text. Similarly, the Corps’ regulations listing “navigable waters of the United States” address the *expressio unius* issue by warning that: “It should be noted that the lists represent only those waterbodies for which determinations have been made; absence from that list should not be taken as an indication that the waterbody is not navigable. See 33 C.F.R. § 329.16(b) (2008).”

¹⁵⁰See, e.g., *United States v. Locke*, 529 U.S. 89, 111, 2000 A.M.C. 913 (2000) (distinguishing laws regulating a vessel’s “primary conduct” from those involving liability).

COLREGS, it is true that nothing in the COLREGS Convention expressly gives States-Parties authority to prescribe “narrow channels or fairways” where Rule 9 applies. On the other hand, neither do the COLREGS require IMO approval before Rule 9 applies, as the convention does for Rule 10 applicable to TSSs,¹⁵¹ suggesting that States have greater latitude to determine where Rule 9 will apply. States have, in fact, long designated waters where the COLREGS Rule 9 applies. In the United Kingdom, for example, designations have been made for the tidal waters of the River Thames¹⁵² and the Port of Tyne.¹⁵³ Moreover, the practice of pre-designating waters where a particular collision avoidance rule applies is certainly not an aberration. That is, in fact, how Rule 10 is structured. That rule applies only to designated TSSs, giving the mariner clear direction on when and where the rule applies.

Within the United States, the Coast Guard has authority to make such designations in both COLREGS and Inland Rules waters. The International Navigational Rules Act of 1977 provides the secretary of the department in which the Coast Guard is operating authority to “[p]romulgate such reasonable rules and regulations as are necessary to implement the provisions of this Act and the International Regulations proclaimed hereunder.”¹⁵⁴ Similarly, the Inland Navigation Rules Act of 1980 authorized the secretary to “[i]ssue regulations necessary to implement and interpret this act.”¹⁵⁵ Whether denominated as “implementing” regulations or “interpretive” regulations,¹⁵⁶ the Coast Guard’s authority to designate narrow channels or fairways for purposes of applying Rule 9 seems beyond *ultra vires* challenge. The Coast Guard’s authority to make such designations under the Inland Rules was made even clearer by the 2004 Coast Guard and Maritime Transportation Act, which authorized the Coast Guard to make future amendments to the Inland Rules by notice and comment rulemaking.¹⁵⁷

¹⁵¹COLREGS Rule 10 applies to “traffic separation schemes adopted by the [International Maritime] Organization.” COLREGS, *supra*, note 5, Rule 10(a). The contrast between Rule 10 and Rule 9 suggests greater latitude has been given to States in their application of Rule 9.

¹⁵²Port of London Authority, River Byelaws, Section III, available at http://www.thames-rrc.org/fileadmin/documents/Tideway_code/code_pg28_to_pg37.pdf.

¹⁵³The Port of Tyne defines the dredged channel (as shown on Admiralty Chart number 1934) as a “narrow channel or fairway.” See Port of Tyne Authority, International Collision Regulations, note following Rule 9, available at <http://www.portoftyne.co.uk/sitepage.aspx?id=137>.

¹⁵⁴33 U.S.C. § 1607 (2006); 33 C.F.R. pt. 82 (2009).

¹⁵⁵33 U.S.C. § 2071 (2006); 33 C.F.R. pts. 89-90 (2009).

¹⁵⁶A rule designating certain waters as a “narrow channel or fairway” would be an “implementing” rule. A rule providing a definition of “narrow channel or fairway” or criteria for making such determinations would be an “interpretive” rule.

¹⁵⁷See *supra*, note 116.

It seems unlikely that Congress would be surprised by a move to designate narrow channels or fairways. The Ports and Waterways Safety Act (PWSA), as amended, authorized the agency to designate port access routes, fairways and traffic separation schemes.¹⁵⁸ In doing so, Congress expressly directed the agency to issue reasonable regulations governing the use of such areas, “including the applicability of Rules 9 and 10” of the COLREGS relating to narrow channels and traffic separation schemes.¹⁵⁹ In addition, the PWSA provides the agency with broad authority to control vessel traffic in hazardous areas or under conditions of vessel congestion or other hazardous circumstances.¹⁶⁰ The statute expressly includes the authority to establish vessel traffic routing schemes. There is no reason why, in the exercise of that authority, the secretary (through the Coast Guard) could not choose to incorporate Rule 9 by reference into those traffic regulations.¹⁶¹

Non-judicial waterway status determinations are nothing new in the United States. The U.S. Coast Guard and Army Corps of Engineers have been making and publishing “navigability” determinations for decades.¹⁶² The agencies’ jurisdiction often turns on whether a given body of water meets the relevant test for “navigable waters of the United States.” Like the test historically applied to determine whether a waterway constitutes a narrow channel under Rule 9, the tests for determining whether a water body falls within the definition of navigable waters of the United States reflects its mixed law and fact nature, the answer to which turns on the waterway’s physical characteristics and its use.¹⁶³

Formal Rule 9 applicability determinations have in fact been in place without serious objection or challenge for more than a quarter of a century. Coast Guard captains of the port or sector commanders have made and published those determinations since at least 1982. For the San Francisco Bay

¹⁵⁸33 U.S.C. § 1223(c)(1) (2006).

¹⁵⁹33 U.S.C. § 1223(c)(5)(A) (2006).

¹⁶⁰33 U.S.C. § 1223(a)(4) (2006).

¹⁶¹Used in this way, Rule 9 might be seen as a “borrowed” rule set, applicable because it has been incorporated by reference into the regulation, even if not applicable *ex proprio vigore*.

¹⁶²33 C.F.R. §§ 2.40, 329.16 (2008).

¹⁶³See *The Daniel Ball*, 77 U.S. (10 Wall.) 557, 563, 2000 A.M.C. 2106 (1870) (setting out the “navigability in fact” test); *Kaiser Aetna v. United States*, 444 U.S. 164, 171-72, 2000 A.M.C. 2495 (1979) (highlighting that the test for navigability varies according to its application; the test for navigability for federal Commerce Clause jurisdiction differs from the test for determining application of the navigation servitude). Within the “navigable waters of the United States” the Rivers and Harbors Act (RHA) prohibits the obstruction of “navigable channels.” 33 U.S.C. § 409 (2006). Under the RHA, the phrase “navigable channel” is not limited to those deeper channels marked by buoys and used by larger vessels but includes any part of a river containing navigable waters, including an anchorage area. See *Chute v. United States*, 610 F.2d 7, 1980 A.M.C. 941 (1st Cir. 1979), cert. denied, 446 U.S. 936 (1980). Moreover, a “fairway” constitutes part of navigable channel, and, as such, it is to be kept open and unobstructed. See *Gaspar v. United States*, 460 F. Supp. 656, 1979 A.M.C. 2232 (D. Mass. 1978).

area, for example, the Coast Guard Captain of the Port issued the following guidance dating back to a 1982 advisory notice:

The Captain of the Port considers the following areas to be “narrow channels or fairways” for the purpose of enforcing the International and Inland Rules of the Road. This list is not all-inclusive, but identifies areas where deep draft commercial and public vessels routinely operate.¹⁶⁴

c. The Process to be Followed in Designations

If the narrow channel “designation” alternative is selected, the actual task of designation could be approached in at least two ways. First, the office of the Coast Guard Commandant charged with waterways management could invoke the agency’s delegated rulemaking authority to promulgate regulations “implementing” the COLREGS and Inland Rules narrow channel provisions by declaring some or all of the waters within the United States that constitute narrow channels or fairways for purposes of Rule 9.¹⁶⁵ Any designation of water bodies as “narrow channels or fairways” must be made in compliance with any legislatively required processes. For example, in the PWSA Congress has prescribed criteria the secretary must consider, the process that must be followed and to some extent the advisors or stakeholders who must be consulted.¹⁶⁶ Regulations designating waterways would constitute a “rule” under the Administrative Procedures Act (APA), requiring the agency to comply with the rulemaking procedures described by the APA and related statutes.¹⁶⁷

The second procedural approach would be for the Commandant to delegate the authority to designate waterways to Coast Guard district or sector commanders, much like the process used in designating “regulated naviga-

¹⁶⁴U.S. Coast Guard, Captain of the Port San Francisco, Advisory 05-095, May 1995, available at U.S. Coast Guard, Vessel Traffic Services San Francisco User’s Manual, <http://www.uscg.mil/d11/vtssf/vtssfum.asp>. See also 33 C.F.R. § 165.1181(c), (d)(3) (2009) (Regulated Navigation Area in San Francisco Bay where operators must comply with Rule 9).

¹⁶⁵Congress authorized the secretary to promulgate reasonable rules and regulations as are necessary to implement the COLREGs in 33 U.S.C. § 1607 and to issue regulations necessary to implement and interpret the Inland Rules under 33 U.S.C. § 2071. In addition, the PWSA, 33 U.S.C. § 1223(c)(5)(A)—part of the Coast Guard’s authority to designate port access routes, fairways and traffic separation schemes—requires the secretary to issue reasonable rules and regulations governing the use of such areas, including the applicability of COLREGS Rules 9 and 10 relating to narrow channels and TSSs.

¹⁶⁶33 U.S.C. §§ 1224, 1231 (2006).

¹⁶⁷The Administrative Procedures Act defines a “rule” as “the whole or part of an agency statement of general or particular applicability and future effect designed to implement, interpret, or prescribe law or policy...” 5 U.S.C. § 551(4) (2006). “Rulemaking” is defined as the “agency process for formulating, amending, or repealing a rule.” 5 U.S.C. § 551(5) (2006). The APA’s rulemaking requirements are codified in 5 U.S.C. § 553.

tion areas.”¹⁶⁸ Determinations would then be made regionally or locally and in consultation with representatives of the USACE and NOAA, state governments, the relevant harbor safety committee, pilots’ associations and VTS personnel. To ensure consistency in the designations among the districts or sectors, the Commandant would presumably issue a directive setting forth the criteria to be applied and the process to be followed in making narrow channel determinations.

d. The Criteria to be Followed in Designations

The narrow channel designation alternative would require development of criteria for designation as a narrow channel or fairway.¹⁶⁹ The starting point for the criteria is the rules themselves. For most restricted waterways in the United States, the applicable rule will be Rule 9 of the Inland Rules. However, the waters of the Puget Sound region in Washington¹⁷⁰ and all of the navigable waters of Alaska¹⁷¹ fall under the COLREGS. Because the COLREGS Convention is a treaty, interpretation of its terms is governed by the relevant articles of the Vienna Convention on the Law of Treaties (VCLT).¹⁷² In the absence of a definition within the convention, the VCLT would require that any interpretation of Rule 9 be in accordance with the “ordinary meaning” of the terms “narrow channel or fairway” in their context and in the light of the COLREGS Convention’s object and purpose.¹⁷³ The object and purpose of the COLREGS is plainly to prevent collisions. Accordingly, any interpretation of the narrow channel rule should serve that purpose. More specifically, the purpose of Rule 9 is to address the unique risks posed by navigation in narrow channels or fairways, thus the need to mitigate those risks must weigh heavily in any construction of the phrase narrow channel or fairway. Rule 2 of the COLREGS (and Inland Rules) pro-

¹⁶⁸33 C.F.R. § 1.01-30 (2009). Authority to promulgate regulations implementing RNAs has been delegated to the district commanders. 33 U.S.C. § 1.05-1(e)(1)(iv) (2009).

¹⁶⁹The IMO structure and process for drafting and implementing Ships’ Routing Systems could serve as a useful model. Such an approach would include a brief definition of “narrow channel” and “narrow fairway,” accompanied by criteria for the rule’s application, a process for evaluation and approval, publication of the designation and education and enforcement measures.

¹⁷⁰The COLREGS apply to the Strait of Juan de Fuca, Haro Strait, the Strait of Georgia, Puget Sound, Lake Washington, Lake Union and Hood Canal. See 33 C.F.R. 80.1385 - .1395 (2009).

¹⁷¹33 U.S.C. § 80.1705 (2009).

¹⁷²Treaty interpretation is governed by Articles 31-32 of the Convention. See Vienna Convention on the Law of Treaties (VCLT), arts. 31-32, May 23, 1969, U.N. Doc. A/CONF.39/39/27, 1155 U.N.T.S. 331. Although the United States is not a party to the VCLT, most of its provisions are binding as customary international law. See Restatement (Third) Foreign Relations Law of the United States § 145 (1987).

¹⁷³VCLT, *supra*, note 172, art. 31(1). The VCLT standard arguably mixes the interpretive approaches of textualism and purposivism.

vides additional guidance on construing the rules. Rule 2(b) acknowledges that dangers of both navigation and collision must be considered in construing and complying with the rules. Thus, in “construing” Rule 9, and applying it to a given waterway, due consideration must be given not only to the danger of collision, but also navigational risks such as allision and grounding.¹⁷⁴

Inland Rule 9 is, at present, a statute. Accordingly, its construction and application are governed by well established principles of statutory construction. They require consideration of the text itself, the context in which that text occurs and the legislative purpose. Unfortunately, those sources will be of little use in interpreting Rule 9. U.S. courts have long recognized that neither the 1980 Inland Rules Act nor its predecessors defined the phrase “narrow channel or fairway.”¹⁷⁵ The legislative history of the Inland Rules Act of 1980 is similarly silent on the question.¹⁷⁶ As a result, the usual starting point is not the text of Rule 9 but rather the narrow channel cases. In considering the effect of those cases, it should be borne in mind that federal courts accord a more stringent *stare decisis* effect to their prior statutory interpretation cases than to their constitutional interpretation cases.¹⁷⁷ It also bears repeating that, because the United States is a party to the COLREGS Convention, COLREGS Rule 1(b) must be considered in any interpretation of the Inland Rules. The COLREGS Convention recognizes that “special rules” may be adopted by some States for certain waterways, but admonishes that such rules shall conform as closely as possible to the COLREGS.

Rule 9 definition and application problems are complicated by the fact that neither the COLREGS nor the Inland Rules distinguishes between narrow “channels” and narrow “fairways.” It is doubtful there was ever an international meeting of the minds on the meaning of either term. Some States use the terms as rough synonyms.¹⁷⁸ In England, the courts distinguish

¹⁷⁴An issue that bears further study is the relationship between Rule 2(a) and 2(b) duties with regard to “special circumstances” and Rule 9 duties applicable in narrow channels or fairways. Arguably, the fact that Rule 9 specifically addresses collision prevention duties in waters constituting a narrow channel or fairway, the factors that determine the waterway’s status as a narrow channel would not constitute “special circumstances” under Rule 2. By contrast, a channel not qualifying as a narrow channel under Rule 9 might present dangers that would constitute “special circumstances” requiring additional precautions under Rule 2(a) or even a departure from the rules, under Rule 2(b).

¹⁷⁵*Canal Barge Co., Inc. v. China Ocean Shipping Co.*, 770 F.2d 1357, 1362, 1986 A.M.C. 2042 (5th Cir. 1985).

¹⁷⁶See *supra*, note 8.

¹⁷⁷14 Penn Plaza, LLC v. Pyett, ___ U.S. ___, 129 S. Ct. 1456, 1478 (2009).

¹⁷⁸See, e.g., Transport Canada, Standard Marine Navigational Vocabulary, Transport Pub. 4330 E, Part II, Glossary (offering no definition for “channel,” but defining “fairway” as the “navigable part of a waterway”), available at <http://www.tc.gc.ca/marinesafety/TP/tp4330/part-ii.htm>.

the two terms, sometimes finding designated "fairways" within "narrow channels." Referring to the earlier version of the narrow channel rule, the English Court of Appeal (Sir Gordon Willmer, J.) explained:

I think it is wrong . . . to treat the word 'fairway' as synonymous with 'channel.' Effect should be given to the fact that those responsible for drafting the rule saw fit to use two separate words. It seems to me that they must have had in mind that within any 'narrow channel' there may well be a defined 'fairway.' If there is a 'fairway' within the narrow channel, the requirement is that a vessel must keep to that side of such 'fairway' which lies on her starboard side. In the relatively rare case of a channel that does not include a defined fairway, the requirement is to keep to starboard of the middle of the channel as a whole.¹⁷⁹

The fact that some States-Parties to the COLREGS Convention use both terms and ascribe different meanings to the terms "channel" and "fairway" does not mean all States do; nor does it mean that those States that do use both terms assign the same meaning to those terms as do other States. Perhaps the most helpful distinction that can be made within the United States is that "fairways" are most often a creature of regulation, and such regulatory designations are made by Coast Guard district commanders. Admittedly, that distinction is of no more help to the mariner faced with a Rule 9 applicability question than the circular explanation that "fairways are where fairway buoys are found." If the Coast Guard concludes that it would be helpful to separately designate narrow channels and narrow fairways where Rule 9 will apply, the designation regulations should include working definitions of each term and then apply those definitions as appropriate to the designated waterways. Alternatively, the distinction could be side-stepped by simply designating the qualifying waterway as a "narrow channel *or* fairway for purposes of Rule 9," as did the Captain of the Port for San Francisco.¹⁸⁰

Rule 9 is written for mariners. Accordingly, the rule should be interpreted according to the understandings of the mariner.¹⁸¹ The criteria for determining which waterways are a "narrow channel or fairway" should be divided between the waterway's physical characteristics and its usage. Various other factors sometimes described by some courts as "surrounding circumstances" will in most cases fit into one of these categories. In contrast to the

¹⁷⁹The *Koningin Juliana*, [1974] 2 Lloyd's Rep. 353, 362 (C.A.).

¹⁸⁰See *supra*, note 164.

¹⁸¹See Felix Frankfurter, *Some Reflections on the Reading of Statutes*, 47 Colum. L. Rev. 527, 536 (1947) ("If a statute is written for ordinary folk, it would be arbitrary not to assume that Congress intended its words to be read with the minds of ordinary men. If they are addressed to specialists, they must be read by judges with the minds of the specialists.").

approach used by a few courts and even by the Coast Guard in a notable license suspension action,¹⁸² the Rule 9 test should focus on the general use of the waterways over time, not on the particular vessels involved. The phrase “narrow channel or fairway” describes a waterway, not the vessels involved in a collision. The predictability that comes from consistent application of the rule can be achieved only by focusing on the waterway itself. Such a rule could, at times, prove over-inclusive, but the safety gains from a predictable rule—particularly one that directs vessels to keep-to-starboard, thereby minimizing the probability of dangerously ambiguous meeting situations—outweigh the occasional inclusiveness error.¹⁸³

The U.S. Supreme Court’s jurisprudence on admiralty and maritime subject matter jurisdiction over tort claims may provide useful guidance for those tasked with drafting the narrow channel designation criteria. Until 1972, the Court applied a relatively straightforward “locality” test for tort jurisdiction established by the Court more than a century earlier in *The Plymouth*.¹⁸⁴ In 1972, the Court announced a new “locality-plus-nexus” test in *Executive Jet Aviation, Inc. v. City of Cleveland*.¹⁸⁵ The subsequent “nexus” cases have confounded many and satisfied few, but they provide two important lessons on “purpose-based” rules for Rule 9 analysts. Writing for the Court in *Sisson v. Ruby*, Justice Marshall explained that maritime nexus is a two-part test that turns on whether the tort has the potential to disrupt maritime commerce and whether the activity giving rise to the incident bears a substantial relationship to traditional maritime activity.¹⁸⁶ Justice Souter later tried to clarify the Court’s nexus test in *Jerome B. Grubart, Inc. v. Great Lakes Dredge and Dock Co.*¹⁸⁷ In explaining the “substantial relationship to traditional maritime activity” prong, he explained that “[w]e ask whether a tortfeasor’s activity, commercial or noncommercial, on navigable waters, is so closely related to activity traditionally subject to admiralty law that *the reasons for applying special admiralty rules would apply in the case at hand.*”¹⁸⁸ Definitions for “narrow channels or fairways” or criteria for

¹⁸²See *supra*, note 59 (U.S. Coast Guard, Decision on Appeal No. 2519 (1991)).

¹⁸³Whether those same safety gains warrant a fresh look at the point-bend custom will be left to others to debate.

¹⁸⁴70 U.S. (3 Wall.) 20, 36, 1999 A.M.C. 2403 (1866) (“[e]very species of tort, however occurring, and whether on board a vessel or not, if upon the high seas or navigable waters, is of admiralty jurisdiction.”).

¹⁸⁵409 U.S. 249, 268, 1973 A.M.C. 1 (1972). See also *Foremost Ins. Co. v. Richardson*, 457 U.S. 668, 673, 1982 A.M.C. 2253 (1982) (extending *Executive Jet*—an aviation case—to a collision between two pleasure boats).

¹⁸⁶497 U.S. 358, 364-65, 1990 A.M.C. 1801 (1990).

¹⁸⁷513 U.S. 527, 1995 A.M.C. 913 (1995).

¹⁸⁸*Id.* at 539-40 (emphasis added).

determining which waterways fall within that class of waters should similarly be grounded in the purposes behind Rule 9.¹⁸⁹

The Supreme Court's approach to the second "potential to disrupt maritime commerce" prong is similarly purpose-based, and it too provides a lesson for those construing Rule 9. In *Sisson v. Ruby*, Justice Marshall explained that "[w]e determine the potential impact of a given type of incident by examining its general character. The jurisdictional inquiry does not turn on the *actual* effects on maritime commerce . . . nor does it turn on the particular facts of the incident in this case"¹⁹⁰ Narrow channel determinations should similarly avoid focusing narrowly on the particular vessels involved or the conditions of the day. To achieve its purpose, Rule 9 must be applied to those waters where the physical characteristics of the waterway and its usage over time call for the specialized collision prevention measures set out in the rule. Just as a narrow focus on the "particulars" of a given incident rather than its "general character" would frustrate the admiralty jurisdiction purpose in protecting against disruption of maritime commerce, too narrow a focus on the particular vessels involved in an incident will frustrate the collision prevention purpose of Rule 9.

e. The Use of Prior Judicial Determinations

Whether designations are made by the Commandant or by district or sector commanders, prior court determinations affirmatively finding that a waterway is a narrow channel or fairway will likely be given great weight. Those prior judicial decisions can be used in two ways. The first use, which no one seriously disputes is valid, is to extract the criteria and methodology used by the courts in reaching those prior decisions, to serve as guides for agencies and mariners in making future determinations. The second use—as a precedent or presumptive precedent—is sometimes contested. Because a channel's status *vel non* as a narrow channel or fairway is a mixed question of law and fact, the courts' prior decisions are not legally binding in future cases where the relevant facts are materially different.

In approaching prior judicial determinations it may be helpful to recall the distinction between the precedential effect of a prior judgment on a purely legal question under the principle of *stare decisis* and the binding effect of a prior judgment on a mixed question of fact and law under the principle of issue preclusion. The issue preclusion doctrine precludes a party from re-lit-

¹⁸⁹As one court explained in a Vineyard Sound, Massachusetts, collision case nearly a century ago, "The narrow channel rule has its advantages and disadvantages, and the aim of the courts is to apply it to waters where its advantages preponderate. Where navigation is constricted into a stream of traffic, it is, generally speaking, advisable to apply the rule." *Commonwealth & Dominion Line, Ltd. v. Seaboard Transp. Co.*, 258 F. 707, 709 (D. Mass. 1919), vacated on other grounds, 275 F. 617 (D. Mass. 1921).

¹⁹⁰*Sisson*, 497 U.S. at 363 (emphasis in original).

igating an issue of fact or law when that issue was actually litigated, determined by a valid and final judgment and its determination was essential to the judgment.¹⁹¹ If the relevant factors are materially different in the second case, the prior judgment would not be binding even on parties to that judgment, to say nothing of the judgment's effect on others who were not party to the litigation. However, the fact that the prior judgment is not legally binding does not mean that a court will not find that judgment persuasive—perhaps even compelling—in future cases involving broadly similar facts.¹⁹²

f. The Use of Prior Agency Determinations

Although not of the same stature as prior judicial determinations, agency findings and classifications of waterways will also be relevant. In a few cases—those involving mariner license revocation or suspension actions for alleged Rule 9 violations—those decisions were reached in a formal adjudication before an administrative law judge. Other decisions or determinations were made in less formal proceedings and often did not even directly address the Rule 9 applicability question. Nevertheless, the agencies' prior determinations are often the product of a rigorous examination of many of the same factors historically relied on by the courts in determining whether a waterway is a narrow channel. At the very least, those determinations can be exploited to reduce the burden of any narrow channel designation undertaking.¹⁹³ Two information sources—one from the Coast Guard and the other from the USACE—are worth singling out.

g. U.S. Coast Guard Navigational Risk Classifications

The Coast Guard's Aids to Navigation (ATON) program has compiled a wealth of information on U.S. waterways that will be useful in making Rule 9 determinations. In establishing the standards for positional accuracy in the

¹⁹¹Restatement (Second) Judgments § 27 (1982). This is not to suggest that the doctrine of issue preclusion will generally bar litigation over a waterway's status as a narrow channel. Issue preclusion never applies to deny a litigant the opportunity to contest a factual issue where that litigant was not a party to the prior litigation, or in privity with a party to the prior litigation. Moreover, the federal government is not bound under the emerging doctrine of non-mutual issue preclusion. *United States v. Mendoza*, 464 U.S. 154, 158-60 (1984).

¹⁹²Similar questions arise in the use of prior decisions by the International Court of Justice (ICJ) and in civil law jurisdictions. Under Article 59 of the ICJ's statute, the court's decisions have no binding force except between the parties and in respect of that particular case. See Statute of the International Court of Justice, art. 59, June 26, 1945, 59 Stat. 1055, T.S. No. 993. Few doubt, however, that despite the absence of stare decisis effect, the ICJ's prior judgments carry considerable weight in subsequent cases, as demonstrated by the court's frequent citations to its prior decisions.

¹⁹³In addition to the information available from the Coast Guard and the Corps of Engineers, maps, charts and data on U.S. waterways are compiled, produced and reported by the U.S. Geological Survey (USGS) and NOAA.

placement of its floating aids to navigation, the Coast Guard has long used a risk-based classification of waterways.¹⁹⁴ To the extent that those waterway ATON accuracy targets incorporate many of the same factors historically used in classifying waterways as narrow channels or fairways under Rule 9, the Coast Guard's ATON classification findings could serve as a useful proxy for Rule 9 narrow channel determinations.

The Coast Guard uses three different approaches to evaluate the positional tolerance level for its buoys. The first approach calculates the waterway's "risk level." A waterway's risk level (rated as great, moderate or low) is based on the type and volume of traffic on the waterway, its environmental sensitivity and the type of bottom. Owing to the greater navigational risk level, buoys placed in waterways classified as a "great" risk require the greatest level of positional accuracy when they are put in place. A waterway characterized by high traffic density, one that includes large commercial vessels, vessels carrying hazardous cargo, environmentally sensitive areas or endangered species, or one with hard bottom conditions where a vessel would likely be holed if it ran aground would likely be classified as a "great risk" waterway. The second approach for classifying a waterway turns on the ratio of the channel width to vessel beam. The channel width is obtained from the USACE project dimensions or charted information and is then compared to the beam of the calculated "composite vessel" (a representative vessel calculated from values for the waterway's typical users). Channels that are narrow relative to the composite vessel beam would be classified as "high risk." The third approach examines the type of "geographic area" where the buoy will be placed.¹⁹⁵ Type 1 waters (rivers, straits, narrows, canals or channels) are those that are deemed "narrow or restricted" waterways. Type 2 waters are those where vessels have more maneuvering room, but might still be restricted. Finally, Type 3 waters are those that pose little restriction on the maneuverability of vessels that transit the area.

The ATON waterway classification program and standards provide a wealth of data and analysis to aid those charged with making Rule 9 waterway classifications. Any waterway within the "great" or even "moderate" risk category is likely to present the kind of physical characteristics and usage that warrant application of Rule 9. The information collected and analyzed by the Coast Guard ATON program could be supplemented with related information collected by the USACE.

¹⁹⁴U.S. Coast Guard, *Aids to Navigation Manual, Positioning*, Commandant Instruction M16500.1C (1996), ch. 4, available at http://www.uscg.mil/directives/cim/16000-16999/CIM_16500_1C.pdf.

¹⁹⁵*Id.* at 4-5.

h. U.S. Army Corps of Engineers Channel Design Data

For many waterways of Rule 9 concern, channel design theory and practice by the USACE will be instructive in making the assessment of the relationship between the channel's physical dimensions and its usage necessary for determining whether a waterway should be deemed a "narrow channel" for purposes of Rule 9. For "engineered" channels, the design process is based on the dimensions of a hypothetical "design vessel" meant to approximate the kind and size of vessels that will typically use the channel (similar to the Coast Guard's "composite vessel").¹⁹⁶ The designers apply a "standard clearance allowance" or "safety factor" to the design vessel dimensions in order to arrive at the channel project dimensions.¹⁹⁷ The channel width must provide for vessel maneuvering lanes in each direction of traffic flow, clearance between vessels when passing each other in the channel and sufficient bank clearance to avoid hydrodynamic interactions.¹⁹⁸ Any channel the width of which is near the minimum design parameters determined by this process would surely be considered narrow for Rule 9 purposes.

As the dimensions of tankers, bulkers, container ships, car carriers, cruise ships and tug and tow flotillas have increased over the years, the original project dimensions for some channels, based as they were on a smaller "design vessel," will render the channel "narrower" relative to the larger vessels. Although many channels have been dredged deeper, to accommodate vessels with deeper drafts, few have been widened. By definition, then, existing channels have become narrower, in a relative sense, as vessels have become wider.¹⁹⁹ A more liberal application of the narrow channel rule could

¹⁹⁶See Bruce L. McCartney, *Ship Channel Design and Operation* (ASCE Manuals and Reports on Engineering Practice No. 107), ch. 8 (2005); Bruce L. McCartney, *Inland Navigation: Locks, Dams, and Channels* (ASCE Manuals and Reports on Engineering Practice No. 94) (1998); National Research Council, *Risk Management in the Marine Transportation System*, Transportation Research Board Conference Proceeding (1999), at 22.

¹⁹⁷The USACE has authority to maintain river and harbor projects in excess of the authorized project dimensions for defense purposes or where the Chief of Engineers determines that such waterways also "serve essential needs of commerce." See 33 U.S.C. § 562a (2006).

¹⁹⁸Channel width components are calculated on the basis of the beam of the "design vessel." The "maneuvering lane" for vessels with good maneuverability is 160 percent of the design vessel's beam (curved channels call for wider maneuvering lanes). Two-way traffic requires two maneuvering lanes. "Ship clearance" is 80 percent of the design vessel's beam and "bank clearance" is 60 percent of the design vessel's beam. Thus, a channel supporting two-way traffic would be designed to be at least 520 percent of the design vessel's beam (two traffic lanes with one "ship clearance" lane between them and a "bank clearance" lane outside each maneuvering lane). See McCartney, *Ship Channel Design and Operation*, supra, note 196, table 8-1, at 64. The need for newer containers ships, car carriers and cruise ships with disproportionately large sail areas to "crab" (i.e., steer a course at an angle to the channel) against cross channel winds more than traditional vessels with less sail area must also be considered in channel design.

¹⁹⁹The trend has led to the observation that channel "depth is for productivity, width is for safety," and greater attention needs to be paid to safety.

ameliorate some of the loss in safety caused by the growth in vessel size without any attendant increase in channel widths.

i. The Legal Effect of Agency Narrow Channel Designations

If this alternative is selected, it seems inevitable that some narrow channel or fairway designations would be challenged in the courts, requiring consideration of the legal effect of those designations. Legal standards for the scope and standard of review and issues of deference will determine the answer. Those standards will, in turn, depend on the nature of the issue. If challenged, agency determinations on factual questions and mixed fact and law questions will be reviewed under a different standard than questions of law.

In considering the effect to be given to designations, it may be helpful to bear in mind the policy justifications for the doctrine of *stare decisis* raised earlier. *Stare decisis* provides certainty and predictability in the rules. Adherence to legal precedent permits attorneys to advise their clients on how to carry out their conduct to conform to the rules establishing their rights, obligations and duties. It promotes judicial economy by sparing courts the need to revisit legal questions on a case-by-case basis while also curbing arbitrary decisions. Finally, the doctrine responds to the belief that fairness requires that similarly situated parties should be treated similarly.

Writing in 1985, the Court of Appeals for the Fifth Circuit explained that because the narrow channel rule does not define "narrow channel" or list the bodies of water to which it applies, "application of the rule has been left to the courts."²⁰⁰ The implication is that, had Congress provided such a definition or listed the waters where Rule 9 applied, the court would have enforced the statute as written, absent any constitutional infirmities. For waters falling under the COLREGS, the agency's narrow channel or fairway designations would in effect supply what is presently missing from Rule 9: specifications on where the rule applies. They would therefore operate in much the same

²⁰⁰Canal Barge Co., Inc. v. China Ocean Shipping Co., 770 F.2d 1357, 1362, 1986 A.M.C. 2042 (5th Cir. 1985). The court went on to say:

The Inland Navigational Rules are of recent vintage; they became effective in late 1981. Because of their relatively recent promulgation, no court has yet interpreted the applicability of Rule 9. The new rules, however, incorporate in part the old Inland Rules. Rule 9, for example, was partially formed from repealed Inland Rule 25, known during its existence as the "narrow channel rule." Many cases have addressed the applicability of old Rule 25. They have said that the determination of what is a "narrow channel" is a mixed question of law and fact. The application of the rule is not based solely on the physical dimensions of the water, but also on the character of navigational use.

Id. (footnotes omitted). The court's approach comports with the so-called "reenactment rule," under which when the legislature reenacts a statute it implicitly incorporates judicial interpretations of the predecessor version.

manner as the “COLREGS demarcation lines” prescribed by Coast Guard regulations to mark the boundaries between those waters where the COLREGS apply and those where the Inland Rules apply.²⁰¹

For waters falling under the Inland Rules, the Coast Guard now has the authority to amend those rules through ordinary rulemaking. The agency could, therefore, either define “narrow channel” (by adding such a definition to Inland Rule 3) or list the bodies of water to which the rule applies, thus obviating a judicial determination. Any challenge to such rulemaking would be governed by the APA.²⁰² Implementation rules and interpretive rules promulgated by the Coast Guard after notice and comment rulemaking or formal agency adjudications (in license suspension or revocation cases for Rule 9 violations) would be entitled to considerable judicial deference.²⁰³ The courts also give deference to an agency’s interpretation of a treaty it is charged with implementing.²⁰⁴ Additionally, because fairways are generally established by regulation, a waterway designated a narrow *fairway* (or a narrow channel *or* fairway) might be upheld in a case where the court might be inclined to second guess the waterway’s status as a narrow *channel*.²⁰⁵

The second procedural approach suggested above relies on local knowledge and processes and would direct Coast Guard district and sector commanders to work with their harbor safety committees and interagency partners to develop and designate those waters under their jurisdiction that constitute narrow channels or fairways for purposes of Rule 9. To the extent such designations were incorporated into rules promulgated in accordance with the APA, they would be subject to the scope and standard of review described above.

²⁰¹33 C.F.R. pt. 80 (2009). See also 33 U.C.S. § 151(a) (2006) (statutory authority for prescribing the demarcation lines). The Coast Guard has also promulgated regulations prescribing the “boundary lines” for purposes of applying rules applicable to “seagoing” vessels and other requirements. See 33 U.S.C. § 151(b) (2006); 46 C.F.R. pt. 7 (2009).

²⁰²5 U.S.C. §§ 706, 553 (2006). Depending on the method used to make the waterway status determinations and the perceived accuracy of the determination’s factual components, a court might hold that the designations are a proper subject for judicial notice under Fed. R. Evid. 201(b)(2), subject to the right of an opponent to be heard. See Fed. R. Evid. 201(e). The contrary argument is that judicial notice is limited to adjudicative facts, and does not extend to mixed law-fact issues.

²⁰³See *Chevron U.S.A., Inc. v. Natural Resources Defense Council*, 467 U.S. 837, 842 (1984) (when Congress has not directly addressed the question at issue courts will defer to an agency’s interpretation if it is based on a “permissible construction of the statute”). See also *Shipbuilders Council of Am. v. U.S. Coast Guard*, __ F.3d __ (4th Cir. 2009). Waterway determinations made in the course of agency adjudications may be given preclusive effect in some limited circumstances. See *Restatement (Second) Judgments* § 83, *supra*, note 191.

²⁰⁴*Sumitomo Shoji America, Inc. v. Avagliano*, 457 U.S. 176, 184 (1982) (the meaning attributed to treaty provisions by agencies charged with their negotiation and enforcement is entitled to great weight). See also Curtis A. Bradley, *Chevron Deference and Foreign Affairs*, 86 Va. L. Rev. 649 (2000).

²⁰⁵The designation of a waterway as a “narrow channel or fairway” should be upheld if it qualifies as either. Thus, a waterway a court had previously found was not a “narrow channel” might nevertheless be found to qualify as a “narrow fairway.”

Advisory determinations by the Coast Guard district commander, captain of the port or sector commander (like the ones issued by Captain of the Port San Francisco) that are not the product of adjudication or rulemaking would be enforced by the agency, but would receive less judicial deference.²⁰⁶

Alternative 4: Publish List of Prior Waterway Determinations and the Criteria and Process for Classifying Other Waterways

The “compiled-list-plus-guidance” alternative provides a less formal and more flexible alternative to formal designation of narrow channels or fairways, while still providing some relief for those unsatisfied with the current approach. It could be pursued as either an interim measure pending later formal narrow channel designations or a final measure. An implementation plan for this option would begin with the compilation and publication of a list of the narrow channel determinations previously made by the courts or the Coast Guard (in license suspension or revocation cases for Rule 9 violations). The list would need to be supplemented by an interpretive rule or guidance document that would define “narrow channel or fairway” and/or set forth the criteria by which waters not on the list would be evaluated to determine if they fall within the rule. The guidance document could take the form of a Navigation Vessel Inspection Circular (NVIC)²⁰⁷ or simply be incorporated into a preamble in the listing document.²⁰⁸

²⁰⁶United States v. Mead Corp., 533 U.S. 218, 229 (2001) (holding that agency interpretations developed through informal procedures do not warrant the same level of judicial deference given to determinations developed through notice and comment rulemaking or adjudications).

²⁰⁷The Coast Guard explains that Navigation Vessel Inspection Circulars (NVICs) provide:

detailed guidance about the enforcement or compliance with a certain Federal marine safety regulations and Coast Guard marine safety programs. While NVIC’s are non-directive, meaning that they do not have the force of law, they are important “tools” for complying with the law. Non-compliance with a NVIC is not a violation of the law in and of itself, however non-compliance with a NVIC may be an indication that there is non-compliance with a law, a regulation or a policy.

NVIC’s are used internally by the Coast Guard to ensure that inspections and other regulatory actions conducted by our field personnel are adequate, complete and consistent. Likewise, mariners, the marine industry and the general public use NVIC’s as means of determining how the Coast Guard will be enforcing certain regulations or conducting various marine safety programs.

U.S. Coast Guard, Navigation and Inspection Circulars: Background Information, available at <http://www.uscg.mil/hq/cg5/NVIC/>.

²⁰⁸The IMO can provide similar “guidance” by issuing Safety of Navigation Circulars. Article 2 of the original IMCO Convention charged the Organization with drafting maritime conventions, agreements or “other suitable instruments.” Convention on the Intergovernmental Maritime Consultative Organization (IMCO), art. 2, Mar. 6, 1948, 9 U.S.T. 621, 289 U.N.T.S. 48 (the name was changed to the International Maritime Organization in 1982). Non-treaty documents issued by the IMO are not legally binding as a matter of international law. See Jens-Uwe Schröder & Anish Arvind Hebbar (World Maritime University),

a. Listing Prior Waterway Determinations

Compiling and publishing a list of the many waterways that have already been examined and found to be or not to be narrow channels and fairways would provide immediate relief for many of the nation's waterways users. The good news is that much of the analytic work for this step has already been completed.²⁰⁹ Courts have examined many of the waterways in the United States and ruled on their status as narrow channels or fairways. Those decisions need only be collected, compiled and organized, in much the same way that navigability decisions are compiled.²¹⁰ The list could include validity comments by the Coast Guard where subsequent developments in the law or changes in the waterway render the earlier decision questionable. The list should include a cautionary statement that describes the intended use and limitations of the list by the agency and the public, and the fact that a waterway's exclusion from the list does not imply that it is not a narrow channel or fairway.

b. The Process for Classifying Other Waterways

The compilation will leave the status of a number of waterways "not previously determined." Accordingly, a process and a definition or set of criteria for classifying the remaining waterways will be needed. Two process levels must be considered. The first is the process by which the definition or classification criteria are developed. To achieve consistency throughout the nation, this process should be undertaken at the national level. The second level of concern is the process by which that definition or criteria is actually applied to the unlisted waters. Given the importance of local knowledge in carrying out this second process step, the task should be delegated to the Coast Guard district and sector commanders, with instructions to work with the relevant interagency partners and harbor safety committees to classify the remaining waters. Including interagency partners and the relevant MTS, stakeholders would likely result in better decisions and greater support for those decisions once made. The process might also invite state agencies or concerned groups to petition for a determination for a particular waterway.

International Standard Setting through the IMO, at 12 ("[d]espite the lack of formal commitment or legal obligation, there is nevertheless an implied obligation on States not to act contrary to the spirit and terms of such instrument, and this obligation is usually complied with."), available at http://www.balticmaster.org/media/files/general_files_693.pdf.

²⁰⁹The geographical index in each of the American Maritime Cases reporters and in the reporter's five year digests collects and organizes cases by geographic area and includes narrow channel or fairway determinations.

²¹⁰Presumably, designated waterways would also be listed in the relevant coast pilot, sailing directions or port guide and marked on charts.

c. The Criteria for Classifying Other Waterways

Official guidance for determining which waters constitute narrow channels or fairways could take one of three forms. The first would be an interpretive rule or NVIC that defines “narrow channel” and “narrow fairway” (assuming the rule maker discerns a material difference between the two terms) and leaves its application to the mariner.²¹¹ The second would be a NVIC or Coast Guard directive that sets out a set of criteria to be applied by district and sector commanders to the waterway in reaching a determination. The third form would combine the two, supplementing a brief definition with explanatory criteria.

Given the fact that the 1972 COLREGS conferees intentionally chose not to include a definition of the narrow channel or fairway term, promulgating an implementing or interpretive rule or publishing criteria for use in determining which waters as narrow channels or fairways would likely prove to be less offensive to COLREGS uniformity than amending the Inland Rules to add a definition.²¹² The criteria might be followed by rules of thumb—distilled from the judicial determinations—setting out certain presumptions that all channels less than, say 600 or 1,000 feet, are “narrow channels” under the rule, and that channels of more than 2,000 feet are not.²¹³ The rules of thumb might, in the alternative or in addition, incorporate references to channel design standards (any channel less than or equal to 1040% of the design vessel beam is presumptively a narrow channel) or Coast Guard ATON positional tolerance determinations (any channel classified as “great” risk is presumptively a narrow channel).²¹⁴

²¹¹This approach assumes the mariner is indeed going to read the guidance documents (in addition to the rules) and would still require the mariner to invest precious decision making time in applying the definition or criteria to the waterway’s physical characteristics and usage to reach a decision. It also still carries the risk of conflicting determinations by the two vessels.

²¹²On the other hand, the IMCO committee report reveals that only four States took part in the brief debate over whether to include a narrow channel definition in the COLREGS, and the recorded comments do not include any consideration of the dangers of rule application uncertainty and conflicting actions. See IMCO Summary Record, *supra*, note 8.

²¹³Any such rules of thumb would have to be clear about how the width is to be measured (bank-to-bank, between channel buoys or just taken from the USACE project width). The fact that the means of measurement must be specified further reinforces the case for designations, which obviate the need for the mariner to make the determination.

²¹⁴The effect of any presumption in subsequent judicial proceedings would be governed by Fed. R. Evid. 301. The need to promote predictability in the application of the rules supports an argument that any presumption in favor of waterway’s status as a narrow channel or fairway would grow stronger over time, absent a material change in the facts or law.

d. Effect of the Narrow Channel Compilation and Resolution of Doubtful Cases

A waterway's status on a list compiled from prior judicial and agency determinations could be simply "some evidence" of the waterway's status, prima facie evidence of its status or it might give rise to a presumption that its status is as listed and shift the burden of production to the party challenging the validity of the listed status. The effect is likely to turn on the source of the information used to determine its status and the forum in which the listed status is being introduced. On principles of fairness and agency efficiency, the listed status should be binding in any proceeding before the Coast Guard to enforce Rule 9.²¹⁵ However, the Coast Guard's status determinations will not be binding on the courts.

In judicial proceedings, the legal effect of a listed waterway's status would—like the current lists of "navigable waters of the United States"—depend on the source of the original determination. Many waterway determinations will be drawn from prior federal court decisions and the effect of any determinations made in those decisions will be governed by the principles of issue preclusion. To promote predictability and judicial economy, it would be entirely reasonable for the courts to accord a rebuttable presumption in favor of the status listed and to allocate the burden of proof to the party challenging that status. The effect of non-judicial waterway status determinations will turn in part on the process by which the determination was made, with determinations made through agency adjudications and APA-compliant rulemaking receiving the greatest deference.

Guidance for determining the status of waterways for which no prior determination has been made (i.e., the "unlisted" waters) should include a carefully-phrased caution to assist in resolving doubtful cases. The COLREGS and Inland Rules include several such *in dubio pro incolumitas* (when in doubt favor safety) rules. Rule 7(a) warns that if there is any doubt whether risk of collision exists, such risk "shall be deemed to exist." Rule 13(c) provides that when a vessel is in any doubt whether she is overtaking

²¹⁵Cf. Model Penal Code § 2.02(3) (1962), which provides that, in criminal cases:

A belief that conduct does not legally constitute an offense is a defense to a prosecution for that offense based upon such conduct when: (a) the statute or other enactment defining the offense is not known to the actor and has not been published or otherwise reasonably made available prior to the conduct alleged; or (b) he acts in reasonable reliance upon an official statement of the law, afterward determined to be invalid or erroneous, contained in (i) a statute or other enactment; (ii) a judicial decision, opinion or judgment; (iii) an administrative order or grant of permission; or (iv) an official interpretation of the public officer or body charged by law with responsibility for the interpretation, administration or enforcement of the law defining the offense.

another, she shall assume that this is the case and act accordingly. Rule 14(c) states that when a vessel is in any doubt as to whether a head-on situation exists she shall assume that it does exist and act accordingly. In each case, the rule seeks to reduce the probability of false negatives (concluding that the rule does not apply when it does), even though it may increase the risk of false positives (concluding that it applies when it does not), on the belief that false negatives present the greater danger. A similar admonition should be included in the Rule 9 interpretive guidance, perhaps suggesting that if there is any doubt whether a channel or fairway is “narrow” for the purpose of applying the rule, the mariner shall assume that it is and act accordingly.²¹⁶ This approach would be fully consistent with Congress’ stated intent that at least parts of Rule 9 will have “wide application,”²¹⁷ and with the Rule 2 requirement to construe the rules with due regard to “all dangers of navigation and collision” and the canon of statutory construction directing that remedial statutes are to be liberally construed.²¹⁸ By leading to wider application of Rule 9, the approach will also reduce the temptation for mariners in restricted waters to invoke the “rule of special circumstances” in Rule 2(b) to justify a departure from the rules. Such departures undermine the predictability provided when approaching vessels follow pre-established rules rather than make up *ad hoc* solutions on the fly.²¹⁹

²¹⁶It is true that this cautionary presumption might lead to false positives by a vessel, which would thereby gain a priority under the rules compared to, say, a crossing vessel. On balance, however, the benefits of applying the presumption in “doubtful” waters should outweigh its drawbacks. It should also be noted that this presumption would only address the first of the narrow channel questions: “Is this waterway a narrow channel or fairway for purposes of Rule 9?” To then apply the rule to waterways that are wider than the channel, the second question (“Where, within this waterway, is the narrow channel or fairway located?”) must still be answered before the operators will be able to comply with the requirement to keep to the starboard side of the narrow channel or fairway.

²¹⁷See *supra*, note 50 and accompanying text (referring to Rule 9(d)).

²¹⁸Although it would be a stretch, the keep-to-starboard rule could be characterized as a “remedy” to what would otherwise be dangerous meeting situations. On the dubious value of canons of construction see Karl N. Llewellyn, *Remarks on the Theory of Appellate Decision and the Rules or Canons About How Statutes Are to Be Construed*, 3 *Vand. L. Rev.* 395 (1950).

²¹⁹See *supra*, note 47 (arguing that, because the circumstances that render a waterway a “narrow channel” are already factored into Rule 9, they would not constitute “special circumstances” that might otherwise justify a departure from the rules under Rule 2(b)). Broader application of Rule 9 to limit resort to Rule 2(b) would be consistent with the apparent judicial hostility to Rule 2(b). See *Crowley Marine Services, Inc. v. Maritrans, Inc.*, 447 F.3d 719, 2006 A.M.C. 1246 (9th Cir. 2006) (limiting any departure from the rules for “special circumstances” under Rule 2(b) to cases where the departure is “necessary to avoid immediate danger” and thereby excluding its longstanding application to cases where the vessels depart by agreement).

V CONCLUSION

Conscientious regulators avoid unnecessary ambiguity or uncertainty in the rules they promulgate to the public. Rules designed to direct mariners in how to prevent collisions between vessels should be subjected to the strictest scrutiny. Mariners need and deserve clearer guidance on where Rule 9 applies than they have been given thus far. They should not have to wait while the possibility of another *Princess Alice* scale disaster looms menacingly around the next bend.

This Article outlines several possible approaches to provide the needed guidance. Formal amendments to the COLREGS and Inland Rules would carry great weight, but they would also take more time than the other options. If the Coast Guard chooses to seize the initiative, it has ample authority to formally designate waterways as narrow channels for purposes of applying Rule 9. Those determinations would be developed through APA rulemaking procedures, which generally requires considerable time, but would be accorded more weight than determinations made by less formal procedures. A less ambitious alternative would be to simply compile and publish a list of prior narrow channel determinations and prescribe a process and criteria to be followed in making narrow channel determinations for the unlisted waterways. The flexibility of this last alternative and its potential to deliver the needed clarification sooner than the first two options will make it attractive for some, at least as an interim measure pending formal waterway designations.

Whichever alternative is selected, the approach to narrow channel determinations should not be parsimonious. Rule 9 has the potential to significantly mitigate collision risks in confined waterways and should be given a liberal interpretation consistent with a precautionary approach to waterway risk management. The growing number and size of vessels will continue to strain the capacity of America's waterways. In the absence of a massive effort to expand waterway capacity, current trends portend a larger role for Rule 9 in the coming years. Waterways deemed sufficient for fifty foot design vessel beams will, by definition, be "narrower" if vessels with beams double or triple the original design vessel beam are introduced into the waterway. Channels originally classified by the Coast Guard ATON program as presenting only low or moderate risk levels will be pushed into higher risk classifications as the number and size of vessels climb and environmentally sensitive areas and endangered species habitats multiply and expand.

Waterway managers cannot flinch from their maritime safety obligations by allowing this dangerous yet curable uncertainty to persist. Rule 9 is the

cornerstone of the collision prevention scheme for confined waters. If any error is committed in determinations regarding application of the rule, they should be errors born of caution. Accordingly, any guidance directed to Coast Guard district and sector commanders and to mariners should caution them that if there is any doubt whether a waterway is a narrow channel or fairway under Rule 9 they should assume that it is.