Washington Law Review

Volume 63 | Number 2

4-1-1988

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Recommended Citation

Craig H. Allen, Comment, *Preventing Merchant Vessel Groundings by Enforcing a Professional Mariner Standard of Care*, 63 Wash. L. Rev. 371 (1988). Available at: https://digitalcommons.law.uw.edu/wlr/vol63/iss2/5

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PREVENTING MERCHANT VESSEL GROUNDINGS BY ENFORCING A PROFESSIONAL MARINER STANDARD OF CARE

Merchant vessels operating in restricted waters face an ever-present risk of running aground or alliding¹ with fixed objects, potentially damaging the vessel and its cargo, and obstructing or polluting the port and waterway. The public impact of a merchant vessel grounding or allision can be devastating.²

Admiralty courts adjudicating claims arising from merchant vessel groundings or allisions are often required to allocate fault for the casualty among three possible parties: The officers and owner of the vessel, the vessel's embarked pilot, and the Coast Guard or any other governmental agency providing navigation services upon which the vessel operators relied. To determine fault, the court must evaluate each party's conduct under the appropriate standard of care. This Comment examines the standard of care applicable to merchant vessel officers and pilots. It concludes that some courts apply a standard to these mariners in determining liability that is less demanding than the standard established by international and federal regulations for merchant vessel navigation, and fails to promote adequately maritime safety.

This Comment proposes that courts adopt and enforce a "professional mariner" standard of care for merchant vessel officers and pilots,³ comprised of elements of general maritime law, the United

^{1.} An allision is a "collision" with a stationary object. T. SCHOENBAUM, ADMIRALTY AND MARITIME LAW 444 n.1 (1987). Not all courts distinguish between groundings and allisions.

^{2.} See, e.g., In re Hercules Carriers, Inc., 566°F. Supp. 962 (M.D. Fla. 1983) (merchant vessel allision with bridge resulting in death of 35 motorists), aff'd, 768 F.2d 1558 (11th Cir. 1985); In re Barracuda Tanker Corp., 409 F.2d 1013 (2d Cir. 1969) (T/V (tank vessel) Torrey Canyon grounding in English Channel resulting in 30 million gallon oil spill); In re Thebes Shipping, 486 F. Supp. 436 (S.D.N.Y. 1980) (T/V Argo Merchant grounding off Massachusetts coast resulting in 7.8 million gallon oil spill); U.S. COAST GUARD, REPORT OF INVESTIGATION: S.S. Arco Anchorage, GROUNDING IN PORT ANGELES HARBOR ON 21 DECEMBER 1985 1 (Feb. 14, 1986) (grounding by supertanker resulting in spill of 189,000 gallons of oil into Puget Sound).

^{3. &}quot;Merchant vessel officers" include the master and licensed mates. The term does not include "pilots," who are ordinarily not members of the merchant vessel's crew. Mates are assigned to the navigation bridge for four hour watches. As the "watch officer," a mate supervises the vessel's navigation and movements, under the master's general direction. See generally 46 U.S.C. ch. 81 (Supp. III 1985) (Manning of Vessels).

Many of the rules which comprise the "professional mariner" standard proposed by this Comment apply only to vessels of 1600 or more gross tons, or only to licensed merchant vessel

States Navigation Safety Regulations (NSR's),⁴ and the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW).⁵ By enforcing the professional mariner standard in merchant vessel grounding and allision cases, courts will promote safety, eliminate the inconsistency between court-imposed standards and government-promulgated standards, and encourage expeditious settlement of claims.

I. A RISING TIDE OF GROUNDING LITIGATION?

Historically, if a ship ran aground the owner bore the cost of any damage to the vessel.⁶ Litigation was generally limited to claims for cargo damage or loss. Several developments have set the stage for a surge in grounding litigation by vessel owners—particularly against the federal government. First, vessel traffic⁷ and the number of groundings⁸ have grown rapidly. Second, potential damages have increased, giving vessel owners a greater incentive to bring suit to recover their losses or shift their liability.⁹ Owners of vessels are also now liable for the cost of cleaning up any resulting pollution¹⁰ and removing the wrecked vessel.¹¹ Third, and most importantly, the United States Supreme Court has recognized a vessel owner's right to

4. 33 C.F.R. § 164 (1986).

5. Done, July 7, 1978, *reprinted in* 6A BENEDICT ON ADMIRALTY Doc. No. 9.38 (7th ed. 1987) [hereinafter STCW] (entered into force Apr. 28, 1984). The United States signed the Convention, but has not yet ratified the treaty. *Id.*

6. Although vessel owners brought some claims against pilots who negligently caused vessel casualties, most pilots lacked the assets to justify a suit. G. GILMORE & C. BLACK, THE LAW OF ADMIRALTY 598 n.24a (2d ed. 1975) (citing cases brought against pilots); *cf.* The China v. Walsh, 74 U.S. (7 Wall.) 53, 68 (1869) (pilots usually judgment-proof).

7. In the Pacific Northwest, between 1975 and 1984, waterborne traffic tonnage on the Columbia River increased by 50%, Seattle traffic increased by 38%, and Tacoma traffic increased by 122%. U.S. ARMY CORPS OF ENGINEERS, WATERBORNE COMMERCE OF THE UNITED STATES, CALENDAR YEAR 1984 PART 4, at 41, 65, 67 (1986).

8. Annual reported commercial vessel groundings in the United States rose from 528 in 1965, to 786 in 1975, and to 1770 in 1985. MARINE SAFETY COUNCIL, U.S. COAST GUARD, STATISTICS OF MARINE CASUALTIES—1965, at 254–55; MARINE SAFETY COUNCIL, U.S. COAST GUARD, STATISTICS OF MARINE CASUALTIES—1975, at 9; MARINE SAFETY COUNCIL, U.S. COAST GUARD, STATISTICS OF MARINE CASUALTIES—1985, reprinted in 44 PROC. MARINE SAFETY COUNCIL 192–97 (Sept. 1987).

9. For example, the Summit Venture's allision with a bridge in Tampa Bay resulted in 35 deaths and property damage estimated at \$31 million. NATIONAL TRANSPORTATION SAFETY BOARD, MARINE ACCIDENT REPORT—RAMMING OF THE SUNSHINE SKYWAY BRIDGE BY THE LIBERIAN BULK CARRIER Summit Venture, TAMPA BAY, FLORIDA, MAY 9, 1980, at 1 (1981) [hereinafter NTSB Summit Venture ACCIDENT REPORT].

officers or pilots. Therefore, this analysis is restricted to merchant vessels and their officers and pilots.

^{10. 33} U.S.C. § 1321(f) (1982).

^{11.} Id. § 409.

bring a claim against the federal government if the government negligently performs a navigation service, such as establishing an aid to navigation,¹² and the government's negligence contributes to a grounding.¹³ In light of the increase in the number of groundings and potential damages, and the multitude of government navigation services,¹⁴ vessel owners will increasingly have the incentive and opportunity to sue the government following a grounding.

During the past twenty years, courts have disagreed over the standard of care for navigation to apply to merchant vessel officers and pilots in grounding cases.¹⁵ Moreover, the standard of care for merchant vessel navigation adopted by some courts conflicts with the standards established by government regulations.¹⁶ Such confusion and conflict invites litigation to determine fault, rather than encouraging parties to settle their claims out of court.

II. FORMULATIONS AND IMPACT OF THE STANDARD OF CARE IN GROUNDING LITIGATION

The substantive law that determines the standard of care in admiralty claims derives from three sources: General maritime law, which originates in admiralty courts; legislative acts and administrative rules; and recognized customs and usages.¹⁷

The standard of care for merchant vessel navigators¹⁸ is a determinant of both government and vessel liability in grounding claims. The government has a duty to protect a navigator's reasonable reliance on a navigation service.¹⁹ If a merchant vessel owner sues the government for damages resulting from a grounding or allision which occurred because the vessel's navigator relied on a malfunctioning aid to navigation, the court must determine whether the navigator's reliance was reasonable. The court looks to the standard of care for merchant vessel officers and pilots to determine whether that reliance

^{12.} An aid to navigation is any device, external to the ship, intended to assist the navigator in determining the ship's position or avoiding danger. 33 C.F.R. § 60.01-5(a) (1986).

^{13.} Indian Towing Co. v. United States, 350 U.S. 61, 69 (1955). See infra text accompanying notes 75–83.

^{14.} See infra notes 72-74 and accompanying text.

^{15.} See infra text accompanying notes 93-131.

^{16.} See infra text accompanying notes 113-116.

^{17.} T. SCHOENBAUM, *supra* note 1, at 444–45. Customs and usages are local practices which lack the force of law, but must be followed for safety reasons. Courts will not enforce customs that conflict with positive law. *Id.* at 449–50.

^{18.} The term "navigator," as used in this Comment, refers to masters, watch officers, and pilots, when actually engaged in navigating the vessel.

^{19.} See infra notes 90-92 and accompanying text.

was reasonable.²⁰ If the court finds the government liable, the court must then apportion damages according to comparative fault.²¹ To ascertain the vessel's fault, the court must further evaluate the actions or omissions of the vessel's officers and pilot under the appropriate standard of care.

A. Merchant Vessel Officer Standards

1. Standard of Care and Presumptions Under General Maritime Law

Under general maritime law, merchant vessel officers are required to possess and exercise the degree of care and skill held by similarly licensed members of the merchant marine profession.²² Where navigation hazards increase, as in restricted waters, the care exercised must be commensurate with the increased risk.²³ Custom may be evidence of the standard of care, but courts often require greater care than mariners customarily practice.²⁴

The Supreme Court has adopted two rebuttable presumptions regarding fault which apply to vessel groundings. Under the first presumption, a vessel is presumed at fault whenever the vessel runs aground or allides with a well charted hazard.²⁵ This presumption is rooted in the conviction that prudently navigated vessels do not in the ordinary course of events run aground.²⁶ Accordingly, courts require the owner of a vessel which has run aground to prove that the crew's navigation practices did not cause the grounding.

Under the second presumption, announced in *The Pennsylvania v.* Troop,²⁷ a vessel is presumed at fault for a casualty if the vessel involved was, at the time of the casualty, in violation of any

^{20.} In this application, reasonableness of the mariner's reliance determines causation. To the extent that the mariner's reliance was unreasonable, courts will find that the mariner's unreasonable reliance proximately caused the casualty. Whitney S.S. Co. v. United States, 747 F.2d 69, 75–76 (2d Cir. 1984) (Tenney, J., dissenting).

^{21.} See infra note 83 and accompanying text.

^{22.} The Garden City, 127 F. 298, 300 (6th Cir. 1904); see also Restatement (Second) of Torts § 299A (1967).

^{23.} The Oregon, 158 U.S. 186, 193-94 (1895); The John Carroll, 275 F. 302, 306 (2d Cir. 1921).

^{24.} Tug Ocean Prince v. United States, 584 F.2d 1151, 1156 (2d Cir. 1978), cert. denied, 440 U.S. 959 (1979); The T.J. Hooper, 60 F.2d 737, 740 (2d Cir. 1932).

^{25.} The Oregon, 158 U.S. at 197.

^{26.} Patterson Oil Terminals v. The Port Covington, 109 F. Supp. 953, 954 (E.D. Pa. 1952), aff'd, 205 F.2d 694 (3d Cir. 1953). This presumption is similar to the doctrine of res ipsa loquitur, applied by courts in collision cases. See T. SCHOENBAUM, supra note 1, at 455.

^{27. 86} U.S. (19 Wall.) 125, 136 (1874).

mandatory²⁸ law or regulation intended to prevent groundings or collisions.²⁹ To rebut the presumption, the vessel owner must prove that the violation could not have been a cause of the mishap.³⁰ The Supreme Court believed that such a strict rule was necessary to ensure vigilant compliance with navigation laws and regulations.³¹

2. Modifications to General Maritime Law Standards for Merchant Vessel Officers by the STCW and NSR's

In 1984 the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW) set new minimum international standards for training, competency, and performance of merchant vessel masters and watch officers.³² These standards incorporate modern procedures which enhance navigation safety. The STCW establishes watch officer duties³³ and prescribes the relationship between vessel masters, watch officers, and embarked pilots.³⁴ Violations of the STCW will not be grounds for invoking the *Penn*sylvania rule until the United States enacts its provisions into mandatory laws or regulations. However, the standards contained in the Convention are now part of customary international law³⁵ and a violation of those standards may be evidence of negligence.³⁶

^{28.} A mandatory law or regulation creates a precise and clear duty not open to interpretation and judgment in its application. In re Marine Sulphur Queen, 460 F.2d 89, 98 (2d Cir.), cert. denied, 409 U.S. 982 (1972).

^{29.} Id. Originally, the Pennsylvania rule applied only in collision cases. The rule has since been expanded and now applies in grounding cases as well. Afran Transp. Co. v. United States, 435 F.2d 213, 218 (2d Cir. 1970), cert. denied, 404 U.S. 872 (1971).

^{30.} The Pennsylvania, 86 U.S. at 136.

^{31.} *Id.* The Court's reasoning is even more compelling today, given the dramatic increase in vessel traffic and casualties and the threat they pose. *See supra* notes 2, 7–8 and accompanying text.

^{32.} See International Maritime Organization, Focus on IMO: The International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, 1978 (1986).

^{33.} STCW, *supra* note 5, Annex, Recommendations on Operational Guidance for Officers in Charge of a Navigational Watch paras. 1–26.

^{34.} Id. para. 25.

^{35.} See RESTATEMENT (REVISED) OF FOREIGN RELATIONS LAW OF THE UNITED STATES § 502 comment c (Tent. Draft No. 6, 1985). According to the Restatement, International Maritime Organization conventions which represent generally accepted standards create an obligation under customary international law, regardless of whether the vessel's flag state is a party to the convention.

^{36.} See In re Hercules Carriers, 566 F. Supp. 962 (M.D. Fla. 1983) (applying International Maritime Consultative Organization (IMCO) navigation standards now contained in STCW), aff'd, 768 F.2d 1558 (11th Cir. 1985).

In response to a number of serious marine casualties, the Coast Guard, in 1977, promulgated the Navigation Safety Regulations.³⁷ The NSR's complement the more general provisions of the STCW. These regulations prescribe specific navigation practices³⁸ and navigation equipment³⁹ required of vessels of over 1600 gross tons, while operating in United States navigable waters.⁴⁰ The United States may deny entry to or assess a civil penalty against a vessel that fails to comply with the NSR's.⁴¹ Most courts hold that a violation of the NSR's is evidence of negligence.⁴² Moreover, a violation of the NSR's should raise a presumption of fault under the *Pennsylvania* rule because the NSR's are mandatory⁴³ and they were enacted to prevent groundings.⁴⁴

B. Vessel Pilot Standards

In most harbors and rivers, merchant vessels are required to take a pilot aboard to assist in navigating the vessel. Federal law requires seagoing vessels engaged in the coastwise trade to embark a federally licensed pilot.⁴⁵ However, Congress reserved to the states the authority to regulate pilotage for foreign vessels and for United States vessels sailing under registry.⁴⁶ Most states have exercised that authority by enacting mandatory pilotage statutes.⁴⁷

41. 33 U.S.C. § 1232(a), (e) (1982).

45. 46 U.S.C. § 8502 (Supp. III 1985).

47. See e.g., ALASKA STAT. § 08.62.160 (1987); HAW. REV. STAT. § 462A-18 (1985); WASH. REV. CODE § 88.16.070 (1987). But see OR. REV. STAT. § 776.405 (1985) (permitting masters to pilot own vessel).

^{37. 42} Fed. Reg. 5,956 (1977).

^{38.} The Navigation Safety Regulations, 33 C.F.R. § 164.11 (1986), require the owner, master, or person in charge of the vessel to ensure that "[t]he wheelhouse is constantly manned by persons who . . . [f]ix the vessel's position" and that "[t]he position of the vessel at each fix is plotted on a chart of the area and the person directing the movement of the vessel is informed of the vessel's position." It further requires that "[e]lectronic and other navigational equipment, external fixed aids to navigation, geographic reference points, and hydrographic contours are used when fixing the vessel's position" and that "[b]uoys alone are not used to fix the vessel's position." Id.

^{39.} Id. §§ 164.30-.41.

^{40.} Id. §§ 164.01-.02.

^{42.} E.g., Commonwealth Elec. Co. v. Woods Hole, Martha's Vineyard, and Nantucket S.S. Auth., 754 F.2d 46, 48–49 (1st Cir. 1985); Western Pac. Fisheries v. Steamship President Grant, 730 F.2d 1280, 1285 (9th Cir. 1984). Contra Olympia Sauna Compania Naviera S.A. v. United States, 604 F. Supp. 1297 (D. Or. 1984). Olympia Sauna is the only case found that rejects the NSR's as evidence of the standard of care and as grounds for invoking the Pennsylvania rule. See infra notes 94–117 and accompanying text.

^{43. 42} Fed. Reg. 5,956 (1977).

^{44. 41} Fed. Reg. 18,766 (1976).

^{46.} Id. § 8501.

1. Expertise Required of Pilots Under General Maritime Law

General maritime law established a demanding standard of care for pilots that continues to govern pilot conduct. In *Atlee v. Northwest Union Packet Co.*,⁴⁸ the Supreme Court charged pilots with possessing consummate knowledge of their pilotage grounds and held pilots to a standard of care commensurate with that knowledge.⁴⁹ The Court recognized that it was setting an exacting standard. However, the Court reasoned that pilot licensing standards and compensation, and the value of life and property entrusted to pilots justified the rigorous requirements.⁵⁰ As with merchant vessel officers, courts have refused to allow custom to dictate the standard of care for pilots.⁵¹

2. Pilots' Relationship with Vessel Officers Under the STCW and NSR's

General maritime law determines the expertise required of pilots. However, the STCW and NSR's have supplanted general maritime law as the standard for allocating responsibility between merchant vessel officers and pilots. The responsibilities established by the STCW and NSR's reflect the increased navigational capabilities of modern merchant vessels and crews and meet the public's demand for improved port and vessel safety.⁵²

The STCW significantly modified the general maritime rule allocating navigational responsibility between vessel officers and pilots. Under the general maritime rule articulated in *The Oregon*, ⁵³ a pilot temporarily superseded the master in command of the vessel's navigation. This early rule recognized the pilot's superior, if not exclusive, local knowledge and the crew's inability to navigate in unfamiliar and restricted waters without adequate charts or navigation aids.⁵⁴ In contrast, the STCW assigns responsibility for navigation to the vessel's

^{48. 88} U.S. (21 Wall.) 389 (1875) (pilot navigating river steamer towing barge that allided with pier at night negligent even though pier was not lighted).

^{49.} Id. at 396. Pilots must also possess and utilize that degree of local knowledge necessary to avoid known dangers independently of charts or outward appearances. Essex County Elect. v. Motorship Godafoss, 129 F. Supp. 657, 660 (D. Mass. 1955); cf. Matheson v. Norfolk & N.A. Steam Shipping, 73 F.2d 177, 180 (9th Cir. 1934).

^{50.} Atlee, 88 U.S. at 397.

^{51.} Transorient Navigators Co. S.A. v. Motorship Southwind, 714 F.2d 1358, 1369 n.10 (5th Cir. 1983); Anglo-Saxon Petroleum v. United States, 222 F.2d 75, 78 (2d Cir. 1955); see also supra note 24 and accompanying text.

^{52.} See 42 Fed Reg. 5,956 (1977); INTERNATIONAL MARITIME ORGANIZATION, FOCUS ON IMO: THE INTERNATIONAL CONVENTION ON STANDARDS OF TRAINING, CERTIFICATION AND WATCHKEEPING FOR SEAFARERS, 1978 (1986).

^{53. 158} U.S. 186, 194 (1895).

^{54.} See Atlee, 88 U.S. at 396.

master and watch officers.⁵⁵ The STCW affirms the master's overall responsibility for safe navigation, even while a pilot is embarked.⁵⁶ The STCW also directs watch officers, if in doubt as to the safety of a pilot's actions, to question the pilot, call the master, and take any actions necessary for safe navigation until the master arrives on the bridge.⁵⁷

The NSR's define the relationship between vessel officers and embarked pilots with even greater detail than the STCW. Under the NSR's, even while a vessel is under pilotage, the vessel's owner or master must ensure that the crew maintains a visual and radar watch for other ships,⁵⁸ fixes and plots the vessel's position, and relays the information to the pilot.⁵⁹ The State of Washington requires pilots to obtain an assurance from the master that the vessel complies with the NSR's before piloting the vessel.⁶⁰

3. Pilot Liability and Discipline

Although pilots are liable for any accident caused by their negligent conduct,⁶¹ state statutes or pilotage contracts largely limit pilot liability.⁶² If a pilot's liability exceeds the statutory limits, the vessel engaging the pilot will be liable *in rem* for the excess damages.⁶³

Under state and federal statutes, the agency which issued a pilot's license may suspend or revoke that license if the pilot commits an act of negligence or misconduct, or becomes incompetent to hold a pilot's

^{55.} The STCW provides that:

Despite the duties and obligations of a pilot, his presence on board does not relieve the master or officer in charge of the watch from their duties and obligations for the safety of the ship. The master and the pilot shall exchange information regarding navigation procedures, local conditions, and the ship's characteristics. The master and officer of the watch shall co-operate closely with the pilot and maintain an accurate check of the ship's position and movement.

STCW, supra note 5, Reg. II/1, para. 10.

^{56.} Id. para. 2.

^{57.} Id. Annex, Recommendations on Operational Guidance for Officers in Charge of a Navigational Watch para. 25.

^{58.} Navigation Safety Regulations, 33 C.F.R. § 164.11(f) (1986).

^{59.} Id. § 164.11(a), (c).

^{60.} WASH. ADMIN. CODE §§ 296-116-200 to 2051 (1986).

^{61.} Burgess v. Tamano, 564 F.2d 964, 983 (1st Cir. 1977), cert. denied, 435 U.S. 941 (1978).

^{62.} E.g., OR. REV. STAT. § 776.520(5) (1985) (limiting liability to \$250); WASH. REV. CODE § 88.16.118 (1987) (limiting liability to \$5,000). In other areas of the United States, pilots limit their liability through pilotage contract clauses. See Note, The Pilotage Clause: Albatross of Admiralty Law, 64 B.U.L. REV. 823 (1985).

^{63.} This is true even if pilotage was compulsory. Homer Ramsdell Transp. v. La Compagnie Generale Transatlantique, 182 U.S. 406, 413 (1901); *Burgess*, 564 F.2d at 982.

license.⁶⁴ Because most pilots hold both federal and state licenses,⁶⁵ both governments may want to bring remedial action against a pilot who negligently causes a marine casualty. However, under existing law, only the government that issued the license under which the pilot was operating at the time of the casualty has jurisdiction to bring such an action.⁶⁶

C. Federal Government's Role and Liability

The federal government has undertaken to prevent marine casualties caused by personnel error⁶⁷ through laws relating to licensing of merchant vessel officers,⁶⁸ minimum crew levels,⁶⁹ marine casualty investigations,⁷⁰ and license suspension and revocation.⁷¹ The government also provides navigation services, such as dredging navigation channels,⁷² publishing charts and nautical references,⁷³ and establishing aids to navigation, including lighthouses, beacons, and buoys.⁷⁴

The federal government may be liable in tort if its negligent performance of a navigation service contributes to a vessel grounding.⁷⁵ Maritime tort claims against the federal government must be brought

66. When piloting a foreign vessel or a United States vessel sailing under registry, the pilot is operating under the state license and only the state may take remedial action. Soriano v. United States, 494 F.2d 681 (9th Cir. 1974); Dietze v. Siler, 414 F. Supp. 1105 (E.D. La. 1976). When piloting a vessel engaged in the coastwise trade, the pilot acts under authority of the federal license and only the federal government may take remedial action. Baggett v. Department of Professional Regulation, Bd. of Pilot Comm'rs, 717 F.2d 521, 523–24 (11th Cir. 1983).

67. Personnel error is the major cause of groundings in the United States. Out of 902 commercial vessel groundings investigated by the Coast Guard in 1985, 598 were caused by personnel error. MARINE SAFETY COUNCIL, U.S. COAST GUARD, STATISTICS OF MARINE CASUALTIES—1985, reprinted in 44 PROC. MARINE SAFETY COUNCIL 199 (Sept. 1987).

72. 33 U.S.C. §§ 401-465 (1982).

74. Aids to Navigation, 33 C.F.R. pt. 62 (1986).

75. See generally Ramsey & Monachino, Admiralty Claims Against the United States, 5 MAR. LAW. 31 (1980) (describing causes of action for negligent aids to navigation and channel maintenance, removal and marking of sunken vessels, and faulty navigation charts).

^{64. 46} U.S.C. §§ 7701–7703 (Supp. III 1985); OR. REV. STAT. § 776.375 (1985); WASH. REV. CODE § 88.16.100 (1987); OR. ADMIN. R. § 856-10-035 (1985); see also Fidell, Improving Competence in the Merchant Marine: Suspension and Revocation Proceedings, 45 Mo. L. REV. 1 (1980).

^{65.} Washington and Oregon require applicants for a state pilot's license to hold a federal pilot's license for the same waters. WASH. REV. CODE § 88.16.090(2) (1987); OR. ADMIN. R. § 856-10-010 (1985).

^{68. 46} U.S.C. ch. 71 (Supp. III 1985).

^{69.} Id. ch. 81.

^{70.} Id. ch. 63.

^{71.} Id. ch. 77.

^{73.} Id. § 883(b).

under either the Suits in Admiralty Act (SAA)⁷⁶ or the Public Vessels Act (PVA).⁷⁷ Under the SAA and PVA the government is liable to the same extent that a private party would be in similar circumstances.⁷⁸

The federal government cannot be sued if the conduct sued upon falls within the discretionary function exception to government tort liability. The Federal Tort Claims Act,⁷⁹ the statute relied upon in most non-maritime tort claims against the federal government, specifically excepts the government from liability for acts involving discretionary functions or duties, even if that discretion was abused.⁸⁰ Although the exception is not explicit in the SAA or PVA, all but one of the circuits which have ruled on the issue have held that the exception is implied in those acts.⁸¹

To prevail in a negligence action against the government, a plaintiff must prove that the government owed the plaintiff a duty, the government failed to exercise reasonable care in discharging that duty, and the government's negligent conduct proximately caused the plaintiff's injuries.⁸² If a court finds the government liable, damages are apportioned on the basis of comparative fault.⁸³

When the government is sued for performing a service for which it has no statutory duty, such as providing aids to navigation, liability is predicated on the "Good Samaritan" doctrine.⁸⁴ A Good Samaritan is one who undertakes, gratuitously or for consideration, to render services for the protection of another.⁸⁵ The Good Samaritan incurs a duty to exercise reasonable care and will be liable if the undertaking either increases the risk of harm or induces detrimental reliance.⁸⁶

The Supreme Court first applied the Good Samaritan duty to the Coast Guard in an aid to navigation case in *Indian Towing Co. v.*

^{76. 46} U.S.C. §§ 741-752 (1982); see also Watson, The Suits in Admiralty Act, 17 J. MAR. L. & COM. 175 (1986). Maritime tort claims against the government may no longer be brought under the Federal Tort Claims Act. Williams v. United States, 711 F.2d 893, 895 (9th Cir. 1983); 46 U.S.C. § 740 (1982).

^{77. 46} U.S.C. §§ 781-790 (1982).

^{78.} Allen v. United States, 338 F.2d 160, 162 (9th Cir. 1964), cert. denied. 380 U.S. 961 (1965); 46 U.S.C. § 742 (1982).

^{79. 28} U.S.C. §§ 1346(b), 2671-2680 (1982).

^{80.} Id. § 2680(a).

^{81.} Wiggins v. United States, 799 F.2d 962, 966 (5th Cir. 1986) (surveying federal circuits and joining "virtually unanimous" view that discretionary function exception is implied in SAA). Only the Fourth Circuit holds to the contrary. Lane v. United States, 529 F.2d 175, 179 (4th Cir. 1975).

^{82.} See Restatement (Second) of Torts § 281 (1965).

^{83.} United States v. Reliable Transfer Co., 421 U.S. 397 (1975).

^{84.} Indian Towing Co. v. United States, 350 U.S. 61, 69-70 (1955).

^{85.} Restatement (Second) of Torts § 323 (1965).

^{86.} Id.

United States.⁸⁷ The Court acknowledged that the Coast Guard had no duty to establish lighthouses. The Court stated, however, that once the Coast Guard did so, and engendered reliance on the light, the Coast Guard incurred a Good Samaritan duty.⁸⁸ This duty required the Coast Guard to exercise reasonable care to maintain the light and to repair it or warn the public if it malfunctioned.⁸⁹

To establish proximate causation in an aid to navigation claim, a mariner must prove that the injury resulted from reasonable or justified reliance on the aid.⁹⁰ The aid to navigation must have been one that a reasonable navigator would have relied on in the circumstances.⁹¹ Reliance is not reasonable if the mariner had notice or some reason to suspect that the aid was malfunctioning.⁹²

III. CONFLICT IN THE COURTS: THE PROFESSIONAL MARINER STANDARD OF CARE VERSUS THE UNWARY MARINER STANDARD

Recent court decisions on grounding claims reveal two conflicting views regarding the standard of care applicable to merchant vessel officers and pilots. Courts adhering to the first view, the "unwary mariner" standard, do not strictly require merchant vessel navigators to comply with navigation practices prescribed by general maritime law or the NSR's and STCW. Courts adopting the unwary mariner standard shift much of the burden for safe navigation onto the government. Courts adhering to the alternative view are evolving a "professional mariner" standard by enforcing general maritime law standards and the STCW and NSR's.

^{87. 350} U.S. 61 (1955).

^{88.} Id at 69 (dictum).

^{89.} Id. The trial court, applying this standard on remand, exonerated the Coast Guard of any fault for the grounding. Indian Towing Co. v. United States, 182 F. Supp. 264 (E.D. La. 1959), aff'd, 276 F.2d 300 (5th Cir.), cert. denied, 364 U.S. 821 (1960).

^{90.} Brown v. United States, 790 F.2d 199, 201 (1st Cir. 1986) (reliance must be justified), cert. denied, 106 S. Ct. 938 (1987); Whitney S.S. Co. v. United States, 747 F.2d 69, 72–74 (2d Cir. 1984) (majority opinion); id. at 75–76 (Tenney, J., dissenting); cf. Afran Transp. Co. v. United States, 435 F.2d 213, 215–18 (2d Cir. 1970), cert. denied, 404 U.S. 872 (1971).

^{91.} Whitney S.S., 747 F.2d at 75 (Tenney, J., dissenting).

^{92.} Afran Transp., 435 F.2d at 215.

A. The Unwary Mariner Standard

A few courts⁹³ apply a standard of care to merchant vessel officers and pilots that fails to meet contemporary demands for port and vessel safety. One such decision, *Olympia Sauna Compania Naviera S.A. v. United States*,⁹⁴ concerned a claim against the federal government brought by the owner of the 830 foot Panamanian vessel *Ypatia Halcoussi*. The *Ypatia Halcoussi* ran aground on a charted reef in the Columbia River while maneuvering to avoid an approaching tug and tow.⁹⁵ The owner alleged that an off-station buoy was the sole cause of the grounding because the buoy misled the vessel's pilot into turning early.⁹⁶

The court found that the vessel's pilot had navigated exclusively by "seaman's eye,"⁹⁷ relied on a buoy to establish the vessel's position in order to time its turn,⁹⁸ and failed to take or plot fixes.⁹⁹ Nevertheless, the court exonerated the *Ypatia Halcoussi* and its pilot of all fault for the grounding¹⁰⁰ and held the Coast Guard solely at fault¹⁰¹ for positioning the buoy laterally fifty or more feet from its charted position.¹⁰²

According to the court, the mispositioned buoy caused the grounding because the buoy was "a trap for the ignorant or unwary" *Ypatia Halcoussi* navigators.¹⁰³ The court's decision significantly derogates the standard for professional mariners.¹⁰⁴ Had the court applied gen-

^{93.} E.g., Whitney S.S., 747 F.2d 69; Afran Transp., 435 F.2d 213; Olympia Sauna Compania Naviera S.A. v. United States (Olympia Sauna I), 604 F. Supp. 1297 (D. Or. 1984), remanded by 774 F.2d 1174 (9th Cir. 1985), on remand (Olympia Sauna II), 670 F. Supp. 1498 (D. Or. 1987).

^{94.} Olympia Sauna I, 604 F.Supp. 1297 (D. Or. 1984).

^{95.} Id. at 1299.

^{96.} Id. at 1298.

^{97.} Id. at 1299. "Seaman's eye" navigation is the practice of directing a vessel's movements solely by visual references, without the aid of accurate position fixing equipment.

^{98.} Id.

^{99.} Id. at 1304.

^{100.} Id.

^{101.} Id. at 1305.

^{102.} Olympia Sauna Compania Naviera S.A. v. United States (Olympia Sauna II), 670 F. Supp. 1498, 1502 (D. Or. 1987). Olympia Sauna, the plaintiff, alleged that the buoy was 50 or more feet off-station. The court cited this figure and concluded that the discrepancy was great enough to mislead the vessel's pilot.

^{103.} Id. at 1507. The only vessel navigator whose conduct was seriously examined was the pilot. The court apparently did not consider that the master or watch officer had any responsibility for the vessel's navigation. This view is contrary to the STCW and its precursor, the IMCO Recommendations on Navigational Watchkeeping. See infra text accompanying notes 128–29.

^{104.} Courts which find the government liable on the ground that a buoy was a "trap for the ignorant or unwary" fail to recognize the professional competence required of licensed pilots and merchant marine officers. The professional standards for those licensed mariners do not permit

eral maritime law standards, it would have found that the master, watch officer, and pilot breached their duty by failing to exercise increased caution in the vicinity of the known reef¹⁰⁵ and by not using the most reliable means available to navigate the vessel.¹⁰⁶

The court's conclusion that the mispositioned buoy was the cause in fact of the grounding is implausible.¹⁰⁷ Moreover, the court failed to look to the appropriate standard of care in determining proximate causation. A malfunctioning aid to navigation can be the proximate cause of a casualty only if the mariner's reliance on the aid was reasonable.¹⁰⁸ According to the court, the pilot relied on the buoy's position to time the vessel's turn in the narrow channel around a known reef.¹⁰⁹ This finding established a sufficient factual predicate for a legal conclu-

106. Charted buoy positions are approximate and inherently unreliable. 33 C.F.R. § 62.25-55 (1986). Therefore, a prudent master and pilot would not have used a bearing on a buoy to time the turn of an 830 foot vessel around a dangerous reef. In narrow channels, like the Columbia River, where it may at times be impracticable to obtain complete fixes, turn bearings and danger bearings are used to supplement and provide a check on "seaman's eye" observations. See E. MALONEY, DUTTON'S NAVIGATION AND PILOTING 275-80, 302-04, (13th ed. 1978). The Ypatia Halcoussi had at least three fixed lights (Lights 2, 4A, and 6) and a channel range available for taking turn or danger bearings or to establish the vessel's position prior to and during the turn. See NATIONAL OCEAN SURVEY, CHART 18524 (13th ed. 1976). A prudent pilot would have required the watch officer to compute and shoot a turn bearing on Light 2, which was nearly abeam of the vessel at the time of its turn. Such a bearing would have provided a reliable indication of the time to turn. A prudent master would have then directed an officer to compute and shoot a danger bearing on Light 4A or 6 and observe the channel range to ensure that the vessel remained in the channel and avoided the reef. Cf. Chesapeake Bay Bridge & Tunnel Dist. v. Lauritzen, 404 F.2d 1001, 1006-07 (4th Cir. 1968) ("Due apparently to overconfidence and routine familiarity, the pilot used none of the navigational devices available to evaluate his own perception. Neither taking fixes himself nor directing the ship's crew to do so . . .").

107. The gravamen of the vessel's claim was that the pilot was misled in determining when the vessel was in position to begin its turn by the line of bearing between Buoy 4 and Light 4A. Light 4A is approximately 1500 yards upriver from Buoy 4. NATIONAL OCEAN SURVEY, CHART 18524 (13th ed. 1976). The court determined that the buoy was 50 or more feet offstation. Any lateral displacement in Buoy 4's position of up to 78.5 feet would result in less than one degree of difference in the line of bearing between Buoy 4 and Light 4A. (In a circle with a 1500 yard radius, one degree of arc equals 78.5 feet). The court therefore must have believed that the pilot could discern—and be misled by—a one degree difference in bearing, without the use of instruments. See also supra note 49 (pilot should be able to avoid known dangers independently of outward appearances).

108. See supra notes 90-92 and accompanying text.

109. Olympia Sauna Compania Naviera S.A. v. United States (Olympia Sauna I), 604 F. Supp. 1297, 1303 (D. Or. 1984).

them to be ignorant or unwary, under pain of having their license revoked or suspended. See supra note 64 and accompanying text.

^{105.} A prudent master and river pilot would have avoided meeting a tug and tow in a narrow channel near a reef with such a large vessel. This could have been accomplished by adjusting the vessel's speed to effect the meeting in a safer location. *See generally* F. BASSETT & R. SMITH, FARWELL'S RULES OF THE NAUTICAL ROAD 324–27, 344 (6th ed. 1982) (examining Rule of Good Seamanship).

sion that the vessel's reliance on the buoy was unreasonable.¹¹⁰ Nevertheless, the court failed to reach that conclusion because it looked to the customary practice of pilots,¹¹¹ not an objective standard of care, to determine whether the vessel navigators' reliance was reasonable.¹¹²

The Olympia Sauna court also rejected the government's argument that the vessel master's violation of the NSR's required the court to invoke the presumption of fault, in accordance with the Pennsylvania rule.¹¹³ The court concluded that the regulations cited were merely "general,"¹¹⁴ and followed other courts that have refused to invoke the Pennsylvania rule where the relevant statutes or regulations do not delineate a clear duty.¹¹⁵ The NSR's, however, are not merely "general" guidelines that are open to individual interpretation. The NSR's specifically delineate responsibility for taking fixes, the equipment and navigation aids which must be used to take those fixes, how they should be plotted, and who must be informed of the fix results.¹¹⁶ The Ypatia Halcoussi's violations of the mandatory NSR's provided ample grounds for invoking the Pennsylvania rule. By concluding that the vessel's failure to comply with the NSR's did not establish a presumption of fault under the Pennsylvania rule or constitute evidence of negligence, the Olympia Sauna court seriously undermined the credibility of the NSR's and dangerously prolonged the era of judicial tolerance of merchant vessel navigation solely by "seaman's eye."¹¹⁷

113. Olympia Sauna I, 604 F.Supp. at 1305 n.19 (referring to Pretrial Order, Defendant's Contentions of Fact, wherein the government cited relevant parts of the NSR's).

114. Id. (citing Afran Transp. Co. v. United States, 435 F.2d 213, 219 (2d Cir. 1970), cert. denied, 404 U.S. 872 (1971)). The fact that the Olympia Sauna court cited Afran Transport as authority for its conclusion indicates that the court confused the NSR's with 33 C.F.R. § 62.25-55, the advisory buoy warnings which were examined in Afran Transport. The court made no attempt to distinguish Western Pacific Fisheries v. Steamship President Grant, 730 F.2d 1280 (9th Cir. 1984) (violation of NSR's is evidence of negligence).

115. In re Marine Sulphur Queen, 460 F.2d 89, 98 (2d Cir. 1972), cert. denied, 409 U.S. 982 (1972).

116. See supra note 39 and accompanying text.

117. Other courts have long recognized the inadequacy of sole reliance on "seaman's eye" navigation. *E.g.*, Chesapeake Bay Bridge & Tunnel Dist. v. Lauritzen, 404 F.2d 1001, 1007 (4th Cir. 1968).

^{110.} See supra note 106.

^{111.} Olympia Sauna I, 604 F.Supp. at 1303 (custom of pilots to rely on Buoy 4 to time turn is prudent). But see Navigation Safety Regulations, 33 C.F.R. § 164.11(e) (1986) (sole reliance on buoys to establish vessel's position prohibited). Although it may be argued that using a line of position (LOP) between a buoy and a fixed light does not amount to "sole reliance" on a buoy, such an argument is without merit. Any lateral displacement of the buoy will change the LOP, therefore, the LOP is wholly dependent on the buoy's position.

^{112.} See supra notes 19-20 and accompanying text.

B. The Emerging Professional Mariner Standard of Care

Courts in the Ninth and Eleventh Circuits hold mariners to a standard of care that incorporates elements of the STCW and NSR's. The Ninth Circuit, in Western Pacific Fisheries v. Steamship President Grant, 118 became the first federal court of appeals to incorporate the NSR's navigation procedures into the mariner's standard of care. Western Pacific Fisheries concerned a claim brought by the owner of a fishing vessel that sank after colliding with the container ship President Grant in San Francisco Bay.¹¹⁹ The Ninth Circuit affirmed the trial court's finding that the President Grant was eighty-five percent at fault, based on the President Grant's violations of the "Rules of the Road"¹²⁰ and the NSR's.¹²¹ Significantly, the court evaluated the vessel's conduct by reference to the NSR's and the Rules of the Road concurrently.¹²² The court correctly recognized that the NSR's-like the Rules of the Road-are critical elements of the mariner's standard of care. Had the President Grant complied with the NSR's it could have avoided the collision.¹²³

A Florida district court led the way in modifying the general maritime law rule allocating responsibility among vessel officers and pilots by applying the standards now contained in the STCW. In *In re Hercules Carriers*, ¹²⁴ the owner of the *Summit Venture* brought a limitation of liability proceeding¹²⁵ when faced with staggering claims after the vessel allided with a bridge in Tampa Bay, causing the bridge to collapse and killing thirty-five people.¹²⁶ The court first had to determine whether the master and watch officer of the *Summit Venture* acted properly in delegating their navigation responsibilities to the pilot.¹²⁷ Because the *Summit Venture* tragedy occurred before pas-

122. Id.

123. By properly fixing its position to ensure that it remained in the appropriate traffic lane, and by plotting and evaluating radar information on the other vessel—as the NSR's required—the *President Grant* could have avoided the collision.

124. 566 F. Supp. 962 (M.D. Fla. 1983), aff'd, 768 F.2d 1558 (11th Cir. 1985).

125. 46 U.S.C. § 183 (1982) permits a ship owner to limit *in personam* liability for claims arising from a marine casualty which occurred without the owner's privity or knowledge to an amount equal to the owner's share of the value of the vessel following the casualty, plus any freight revenues owed to the vessel. *See also* Fed. R. Civ. P. Supp. R. F.

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126. Hercules Carriers, 566 F. Supp. at 967.

127. Id. at 972-76.

^{118. 730} F.2d 1280 (9th Cir. 1984).

^{119.} Id. at 1281-82.

^{120. 33} U.S.C. §§ 1601–1608 (1982) (International Regulations for Preventing Collisions at Sea).

^{121.} Western Pacific Fisheries, 730 F.2d at 1285. The court found that the President Grant violated the NSR's by not obtaining, plotting, and evaluating radar information on the other vessel and by relying on buoys for navigation. Id. at 1283-86.

sage of the STCW, the court looked to the STCW's precursor, the Intergovernmental Maritime Consultative Organization (IMCO) Recommendations on Navigational Watchkeeping,¹²⁸ to determine the vessel officers' responsibility. The court held that the master and watch officer's exclusive reliance on the pilot's navigation violated the IMCO Recommendations and that the master and watch officer were therefore negligent.¹²⁹ The court also found that the vessel was unseaworthy¹³⁰ and denied the owner's petition to limit liability because the owner had failed to train adequately the *Summit Venture's* crew and ensure they complied with the IMCO standards.¹³¹

IV. ADOPTING THE PROFESSIONAL MARINER STANDARD OF CARE WILL ENCOURAGE SAFETY AND PROPERLY ALLOCATE THE COSTS OF GROUNDINGS

The professional mariner standard of care proposed by this Comment incorporates the best elements of general maritime law and standards contained in the STCW and NSR's. The courts in *Western Pacific Fisheries* and *Hercules Carriers* have each made important contributions to maritime safety by adopting elements of the professional mariner standard. But no court has yet applied the standard comprehensively. Courts that fully adopt and apply the professional mariner standard will be in accord with contemporary international and federal prescriptions. By applying the professional mariner standard, courts will also properly allocate the costs of merchant vessel groundings.

A. Elements of the Professional Mariner Standard of Care for Merchant Vessel Officers

The professional mariner standard of care enlarges the responsibilities of merchant vessel masters and watch officers without diminishing the care or expertise required of pilots.

The professional mariner standard for vessel officers retains two general maritime law rules which make important contributions to

^{128.} Recommendation on Basic Principles and Operational Guidance Relating to Navigational Watchkeeping, IMCO Res. A.285 (viii), 8th Sess. (1973). The owners of the Summit Venture had adopted the IMCO Recommendations as company policy. Hercules Carriers, 566 F. Supp. at 974. The IMCO standards establishing the relationship between vessel officers and pilots are virtually identical to the standards now contained in the STCW.

^{129.} Hercules Carriers, 566 F. Supp. at 974.

^{130.} Id. at 976-77.

^{131.} Id. at 979-82.

navigation safety. First, the standard of care for merchant vessel officers would continue to be that of licensed members of the profession generally.¹³² This rule properly distinguishes merchant vessel officers from unlicensed fishing vessel operators and pleasure boaters.¹³³ Second, the professional mariner standard would continue to require merchant vessel officers to exercise a degree of care commensurate with the risk encountered, thus demanding greater care when navigating in restricted waters.¹³⁴ These general maritime rules would be supplemented by the relevant standards contained in the Rules of the Road, STCW and NSR's, particularly those provisions assigning navigation and watch responsibility to the vessel's master and watch officers. Courts would deny petitions for limitation of liability brought by owners who failed to take steps to ensure that their vessel's master and watch officers complied with the professional mariner standard.¹³⁵

The STCW and NSR's, together with the best standards under general maritime law, provide a modern paradigm for safe merchant vessel navigation. The paradigm recognizes that in the modern era conning merchant vessels by "seaman's eye" is always necessary, but navigating by "seaman's eye" alone is never sufficient or prudent.¹³⁶

B. The Professional Mariner Standard Will Reduce the Number of Groundings by Properly Allocating Their Costs

By enforcing the professional mariner standard of care, courts will allocate costs in a way that will reduce the number of groundings. Conversely, courts will allocate the costs of accidents in a manner that fails to promote safe navigation if they require the government to compensate the owner of a vessel which ran aground after its pilot or officers failed to navigate in accordance with the professional mariner standard of care.

^{132.} See supra note 22 and accompanying text.

^{133.} The Supreme Court, in Foremost Insurance Co. v. Richardson, 457 U.S. 668 (1982), greatly expanded federal admiralty and maritime jurisdiction. Parties may now bring claims arising from casualties involving pleasure boats which occur on navigable waters of the United States in federal admiralty courts. See Carnilla & Drzal, Foremost Insurance Co. v. Richardson: If This is Water, It Must be Admiralty, 59 WASH. L. REV. 1 (1983). Courts adjudicating grounding claims must, therefore, carefully distinguish the standard of care for licensed pilots and merchant marine officers from the standard for unlicensed boat operators. Cf. RESTATEMENT (SECOND) TORTS § 299A (1965).

^{134.} See supra note 23 and accompanying text.

^{135.} See supra note 125 and accompanying text.

^{136.} See supra note 117 and accompanying text.

Dean Calabresi¹³⁷ describes two approaches for reducing the cost to society of accidents and the costs of preventing accidents: Primary accident cost avoidance, which benefits society by providing incentives to prevent accidents;¹³⁸ and secondary accident cost avoidance, which transfers or spreads the costs of accidents, without incurring the additional transaction costs inherent in a fault based system.¹³⁹

Primary accident cost avoidance reduces the number and severity of accidents by discouraging accident causing activities and substituting safer alternatives.¹⁴⁰ This may be accomplished through specific or general deterrence methods. Specific deterrence reduces the number of accidents by prohibiting accident causing acts or activities.¹⁴¹ General deterrence methods force firms to internalize the costs of accident causing activities, enabling the market to determine the desirable level of the activity based on the activity's true cost and value to society.¹⁴²

The STCW and the NSR's are specific deterrence measures which prohibit unsafe navigational practices. The NSR's are presently enforced by civil penalties or by denying entry to vessels which fail to comply.¹⁴³ Courts can enhance the effectiveness of these measures by incorporating the STCW and NSR's into the merchant vessel navigator's standard of care, thus imposing civil liability consequences if a navigator violates the standards. Specific deterrence may also be achieved by taking prompt and consistent remedial action against pilots or federally licensed merchant vessel officers who fail to comply with the required standard of care. States can also further specific deterrence by adopting statutes which impose a duty on state licensed pilots to ensure that vessels comply with the NSR's and other safe navigation practices.¹⁴⁴

Courts will promote general deterrence by requiring merchant vessel navigators to comply with the professional mariner standard of

141. Id. at 95-129.

143. 33 U.S.C. § 1232(a), (e) (1982).

^{137.} G. CALABRESI, THE COSTS OF ACCIDENTS (1970). Although Calabresi's analysis was directed toward a nonfault theory of tort liability, the principles articulated are relevant to any discussion of accident cost allocation.

^{138.} Id. at 26.

^{139.} Id. at 27-28, 252.

^{140.} Id. at 26.

^{142.} Id. at 68-94.

^{144.} The State of Washington's rule is an excellent example. See supra note 60 and accompanying text. Washington also assesses civil penalties against pilots who negligently cause a vessel grounding which results in pollution of state waters. Following the Arco Anchorage grounding, the pilot responsible was assessed a \$60,000 penalty. Letter from Washington State Department of Ecology to Craig Allen (Sept. 29, 1987) (copy on file with the Washington Law Review).

care and by refusing to permit vessel owners to limit their liability if the owners fail to require their vessels' crew to comply with the standard. When vessel owners or insurers bear the cost of vessel groundings, the cost will ultimately cause the price of shipping services to increase, reflecting true shipping costs. An increase in prices will encourage differentiation within the vessel shipping industry, as shipping companies attempt to reduce their accident costs to gain a competitive advantage.¹⁴⁵ A general deterrence approach, through strict enforcement of the professional mariner standard of care, will thus provide a strong incentive for vessel owners to ensure that their vessels are more safely navigated.

Secondary accident cost avoidance is a compensation oriented approach¹⁴⁶ which seeks to spread the risk or cost of accidents among a large group or transfer them to a "deep pocket."¹⁴⁷ This approach is undesirable because it fails to promote safe navigation.¹⁴⁸

Transferring accident costs to a "deep pocket" externalizes accident costs and eliminates any incentive to take accident preventing initiatives. When courts require the government to compensate vessel owners for groundings which the vessel's navigators could have prevented by complying with the professional mariner standard, they subsidize unsafe vessel navigation. More importantly, such decisions may decrease the level of services the government provides to mitigate navigation hazards. The government has no market to which it can pass the costs of damage awards. Therefore, the costs of judgments must be borne either by the public, through increased taxes, or by other vessel operators, who will receive a reduced level of navigation services. Thus, the "deep pocket" approach will tend to increase the level of unsafe vessel navigation—the accident causing activity—beyond that level which the market would permit, and decrease the level of

146. Id. at 21, 44.

^{145.} See CALABRESI, supra note 137, at 73–74. Incorporating human factor readiness conditions into the current vessel classification system would efficiently promote safe navigation. Classification societies like the American Bureau of Shipping survey vessels and assign a classification rating commensurate with the vessel's construction and equipment condition. Insurance premiums are largely a function of a vessel's classification. Responsible vessel owners and insurers should encourage classification societies to expand their classification criteria to include the vessel's level of readiness for hazardous navigational conditions. If a vessel owner's policy requires that additional watchstanders be assigned to the bridge during transits in restricted waters or reduced visibility, the vessel's classification should acknowledge that higher level of safety. The owner would then be rewarded for the initiative through reduced insurance premiums.

^{147.} Id. at 28. Allowing vessel owners to limit their in personam liability is a common loss transfer or spreading technique.

^{148.} See id. at 27-28, 64.

government provided navigation services—the accident preventing activity. The likely result will be more vessel groundings.

V. PILOT EFFECTIVENESS WILL BE ENHANCED UNDER THE PROFESSIONAL MARINER STANDARD OF CARE

The general maritime rules establishing the expertise required of pilots will continue to govern pilot conduct under the professional mariner standard of care. The professional mariner standard also incorporates the provisions for vessel officer and pilot responsibility in the STCW and the NSR's, to allow pilots to operate more effectively and contribute needed safeguards over the pilot's navigation.

General maritime law imposed too many responsibilities on pilots, making it difficult for the pilot to attend adequately to crucial operations when several operations had to be performed simultaneously.¹⁴⁹ The professional mariner standard remedies that problem by requiring vessel watch officers to perform many of the necessary bridge watch functions¹⁵⁰ and provide information to supplement the pilot's local knowledge and "seaman's eye" observations.¹⁵¹ At the same time, the standard requires the vessel's master and watch officers to evaluate and scrutinize the pilot's actions to detect and correct errors which might otherwise result in a grounding. The professional mariner standard will thus enhance pilot effectiveness by freeing the pilot to focus on those operations which are most critical at any given time and by providing a check on the pilot's decisions.

Pilot fatigue will be reduced under the professional mariner standard, as the vessel's watch officers assume some of the navigation and watchstanding duties presently performed by pilots.¹⁵² Vessel watchstanders are rotated every four hours, while pilots remain on the bridge throughout the vessel's transit over the pilotage grounds. A trip over a pilotage ground may take as long as ten hours.¹⁵³ Often-

^{149.} For example, immediately prior to the *Ypatia Halcoussi's* grounding, the pilot was attempting to establish the vessel's position for the turn and ensure that the quartermaster properly executed the pilot's steering commands. The pilot's preoccupation with those duties forced him to delay checking his position by observation of the channel range lights and prevented him from signaling the approaching tug to secure a passing agreement. Trial Transcript at 265–66, 271, Olympia Sauna Compania Naviera S.A. v. United States (*Olympia Sauna I*), 604 F. Supp 1297 (D. Or. 1984). The record contains no evidence that the vessel's master or watch officer offered any assistance to the pilot in performing those duties.

^{150.} See supra notes 38, 55-57 and accompanying text.

^{151.} See supra note 38.

^{152.} See supra notes 38, 55-57 and accompanying text.

^{153.} For example, the 90 mile transit from Astoria to Portland, Oregon or Port Angeles to Tacoma, Washington may take six to ten hours, depending on vessel traffic and visibility.

times, a variety of conditions are encountered which can lead to pilot fatigue.¹⁵⁴ By putting more responsibility on the vessel's watch officer and, if circumstances require, drawing supplemental bridge watch officers from the vessel's crew, workload induced pilot fatigue will be mitigated.

Pilot license suspension or revocation proceedings are the most efficient means of ensuring that pilots meet their professional standard of care and should be employed wherever warranted. Statutes or pilotage contract clauses which limit pilot liability for acts of negligence are inconsistent with a liability system based on fault; however, holding pilots liable for multi-million dollar damage suits would only result in an undesirable increase in pilotage tariffs.¹⁵⁵ Instead, to promote safety, license suspension and revocation actions should be brought against pilots who fail to comply with their professional standards. But, if this approach is to be effective, federal and state licensing authorities must be diligent in applying these remedial measures to maintain the standard of care expected of pilots.¹⁵⁶

Moreover, to ensure that only qualified pilots are licensed to navigate vessels, the federal and state governments must have concurrent

156. The Coast Guard extensively uses license suspension procedures to maintain pilot competence. Between 1982 and 1986, the Coast Guard investigated 42 navigation incidents involving pilots. In 17 cases an administrative law judge suspended or revoked the pilot's license, or issued a letter of admonition; in nine cases the Coast Guard investigating officer issued a letter of warning to the pilot. U.S. Coast Guard Memorandum (Oct. 22, 1987) (copy on file with the *Washington Law Review*).

The states surveyed demonstrate disparity in their readiness to use remedial actions against negligent pilots. Washington's performance is exceptional. During the period 1982–1987 the Washington Board of Pilot Commissioners investigated 64 mishaps involving state licensed pilots. The Board issued letters of caution or warning to four pilots and suspended the licenses of three others. Letter from Washington Board of Pilot Commissioners to Craig Allen (Sept. 25, 1987) (copy on file with the *Washington Law Review*).

Oregon and California make little or no use of remedial actions to maintain pilot competency. Between 1984 and 1987, the Board of Pilot Commissioners for San Francisco Bay investigated 98 pilot mishaps. No pilot license was suspended or revoked. One particular pilot was involved in three groundings, one collision, and four docking incidents in two years, yet he received nothing more remedial than counselling sessions. Memorandum Report, San Francisco Board of Pilot Commissioners (1987) (copy on file with the *Washington Law Review*). Between 1983 and 1987, the Oregon Board of Maritime Pilots received 80 reports of pilot mishaps. One pilot license was suspended; none was revoked. Letters from Oregon Board of Maritime Pilots to Craig Allen (Oct. 8, 1987; Dec. 3, 1987; Dec. 10, 1987) (copies on file with the *Washington Law Review*).

^{154.} This is particularly true when the vessel encounters restricted visibility or obstructions, such as sport or gillnet fishermen.

^{155.} In the absence of limited pilot liability, pilots would be forced to procure "trip insurance" for the vessels they pilot and would add the premiums to the tariff they charge vessels. Since vessel owners have already insured their vessels, this would result in double payment for insurance. A. PARKS, THE LAW OF TUG, TOW, AND PILOTAGE 1034–39 (2d ed. 1982).

jurisdiction to bring remedial actions in all cases of misconduct, negligence, or incompetence involving a pilot who holds licenses from both governments. Under existing law, the pilot who rammed the Summit Venture into the Sunshine Skyway Bridge¹⁵⁷ could lose his state license for piloting foreign vessels, but could continue to pilot coastwise vessels under his federal license-even if the state had found him unfit to pilot vessels.¹⁵⁸ Suspending one license, while allowing the pilot to continue to operate under the other, undermines the effectiveness of using remedial proceedings to ensure pilot competence. Pilots must be equally proficient to navigate foreign vessels as to navigate vessels in the coastwise trade. As the United States Senate,159 National Transportation Safety Board,¹⁶⁰ and General Accounting Office¹⁶¹ have all concluded, the pilotage statutes should be amended to permit suspension or revocation action against a pilot, regardless of which license the pilot was operating under at the time of the misconduct or negligence.

VI. THE GOVERNMENT MUST EXERCISE REASONABLE CARE IN PROVIDING NAVIGATION SERVICES

A rule requiring vessel officers and pilots to comply with the professional mariner standard will ensure that the existing rules of government liability are properly applied.

To avoid liability to mariners, the government must continue to exercise reasonable care in performing services relied upon by those mariners. However, the government will not be liable where a mariner's unreasonable reliance on a navigation service proximately causes a grounding or allision. For example, government warnings that buoy positions are approximate and unreliable¹⁶² limit the extent to which mariners may reasonably rely on buoys.¹⁶³ Buoys may be reasonably

163. The Coast Guard has a duty to repair malfunctioning aids to navigation (to permit continued reliance) or issue warnings of the malfunction (to terminate reliance). Indian Towing Co. v. United States, 350 U.S. 61, 69 (1955). The Coast Guard has provided advance warning of the inaccuracy and unreliability of buoys to limit mariners' reliance on buoys to those

^{157.} NTSB Summit Venture ACCIDENT REPORT, supra note 9, at 1, 43.

^{158.} See supra note 66 and accompanying text.

^{159.} S. 682, 95th Cong., 1st Sess. § 105(d)(5) (1977).

^{160.} NTSB Summit Venture ACCIDENT REPORT, supra note 9, at 43.

^{161.} U.S. COMPTROLLER GENERAL, HOW EFFECTIVE IS THE COAST GUARD IN CARRYING OUT ITS COMMERCIAL VESSEL SAFETY RESPONSIBILITIES? No. CED-79-54, at 58-64 (May 25, 1979).

^{162. 33} C.F.R. § 62.25-55 (1986) cautions mariners that buoy positions are approximate and are unreliable for numerous reasons, including inherent imprecision in position fixing methods, sea conditions, slope of the seabed, the length of the chain used to moor the buoy, and external forces which may move or damage the buoy. See also id. § 164.11(e).

relied on to orient a vessel, alert the mariner to hazards, or to establish an approximate position.¹⁶⁴ Merchant vessel officers and pilots who fail to heed these warnings, and rely solely on buoys to attempt to establish their vessel's position, violate the NSR's¹⁶⁵ and therefore act unreasonably. They do so at their peril because the government has no duty to protect mariners against their own unreasonable reliance.¹⁶⁶

The government should also bear no liability for claims which assert that additional aids to navigation should have been installed or that the aids which were installed should have been placed in different locations.¹⁶⁷ Unless Congress amends the Coast Guard's enabling statute¹⁶⁸ to withdraw the Coast Guard's discretion in making decisions regarding aids to navigation, and replaces that discretion with an affirmative duty to establish those aids,¹⁶⁹ the Coast Guard will continue to be free to define the limits of its aids to navigation undertakings. These Coast Guard discretionary decisions are not subject to review by courts through the medium of tort suits.¹⁷⁰

VII. CONCLUSION

Federal courts serve a pivotal role in promoting maritime safety by fashioning the standard of care that officers and pilots must follow while navigating merchant vessels and by determining the conditions under which vessel owners will be permitted to limit their *in personam* liability. The public's interest in keeping ports and waterways open

navigational uses for which they were designed, as described in the Navigation Safety Regulations, 33 C.F.R. § 164.11(e) (1986).

164. Navigation Safety Regulations, 33 C.F.R. § 164.11(e) (1986).

165. Id. Moreover, the vessel's violation of the NSR's would be grounds for invoking the *Pennsylvania* rule, requiring the vessel owner to prove that sole reliance on the buoy could not have been a cause of the grounding.

166. See supra notes 20, 90–92. Whether this rule is couched in terms of the now discredited defense of "assumption of risk" (voluntarily accepting a known risk) or "lack of duty" by the government, the conclusion will be the same. See W. PROSSER & W. KEETON, THE LAW OF TORTS 481 (W. Keeton, D. Dobbs, R. Keeton, D. Owen 5th ed. 1984).

167. E.g., Eklof Marine Corp. v. United States, 762 F.2d 200, 203 (2d Cir. 1985) (if government elects to mark a danger, it may be liable if it fails to place sufficient aids to mark the danger adequately).

168. 14 U.S.C. § 81 (1982).

169. It stands to reason that such a change in program authorization would require a considerable increase in program appropriations.

170. See Chute v. United States, 610 F.2d 7, 13–14 (1st Cir. 1979), cert. denied, 446 U.S. 936 (1980); see also Canadian Transp. v. United States, 663 F.2d 1081, 1085 (D.C. Cir. 1980) (respect for separation of powers requires that in SAA cases courts refrain from passing judgment on the appropriateness of actions of the executive branch which meet the requirements of the discretionary function exception).

for commerce and in protecting vessels, their crews, and the marine environment from harm caused by vessel groundings and allisions presents a compelling reason for courts to adopt a new definition of responsibility for merchant vessel navigators. The "professional mariner" standard, incorporating the best principles of general maritime law and the STCW and NSR's, provides the needed definition.

By adopting the professional mariner standard, courts will ensure that merchant vessel officers and pilots are governed by the same standard in tort suits as in civil penalty enforcement actions and license suspension and revocation proceedings. Eliminating conflicts among standards will ease court dockets by promoting settlement of claims. Application of the professional mariner standard to merchant vessel claims will also properly allocate the costs of vessel groundings. Finally, by refusing to permit vessel owners to limit their liability, should they fail to ensure compliance by their vessel's crew with the professional mariner standard, courts will provide a strong economic incentive for vessel owners to improve navigation safety.

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