

Training - Becoming a Pilot

The path to becoming a maritime pilot

Pilots are among the best trained and most skilled mariners in the industry

by Capt. Jorge Viso and Clayton Diamond

Marine pilotage dates back to ancient times, perhaps as early as when waterborne commerce first emerged. While not generally well understood by the public or even within the maritime sector, pilotage is essential to the safe, environmentally responsible and efficient movement of maritime commerce.

In order to successfully direct large commercial vessels through confined and shoaled waterways, pilots must be — and are — the most highly trained mariners in the world. They must not only be unquestioned experts about their port, but they must also possess superior shiphandling and navigation skills, as well as being able to adapt quickly to all types and sizes of ships and to bridge teams from all over the world.

Although pilot selection processes vary from state to state, each is designed to support the recruitment and retention of mariners who will become pilots of the highest skill and expertise. As discussed below, the path to selection typically involves meeting key entry qualifications, obtaining varying levels of

merchant mariner credentials (MMC) and participating in examinations and interviews. For a mariner who is ultimately selected for a pilot training program, he or she can expect a rigorous apprenticeship that can last up to seven years.

“State-licensed pilots provide a vital safety service to the shipping industry and to the American public,” said Capt. Jorge Viso, president of the American Pilots’ Association (APA). “They have one of the most challenging jobs in the maritime world, and the process they must go through to be selected to enter this profession, be fully trained, licensed and periodically recertified is equally and appropriately as challenging.”

Pilotage in the U.S.

Pilotage of international trade vessels in the U.S. is regulated by the 24 coastal states. This system dates to the Lighthouse Act of 1789, legislation that gave states the authority to regulate pilotage in their waters. The Supreme Court in 1852 further asserted the primacy of

state oversight of pilotage, and this system has been reaffirmed by the courts and Congress many times over the years. Over the more than two centuries since the passage of the Lighthouse Act, Congress has carved out a limited role for the federal government with respect to pilotage regulation.

Under the laws of the coastal states, every foreign-flag vessel and every U.S.-flag vessel engaged in international trade moving in state pilotage waters is required to take a state-licensed pilot. These “international trade vessels” represent well over 95% of all merchant ships moving in U.S. waters.

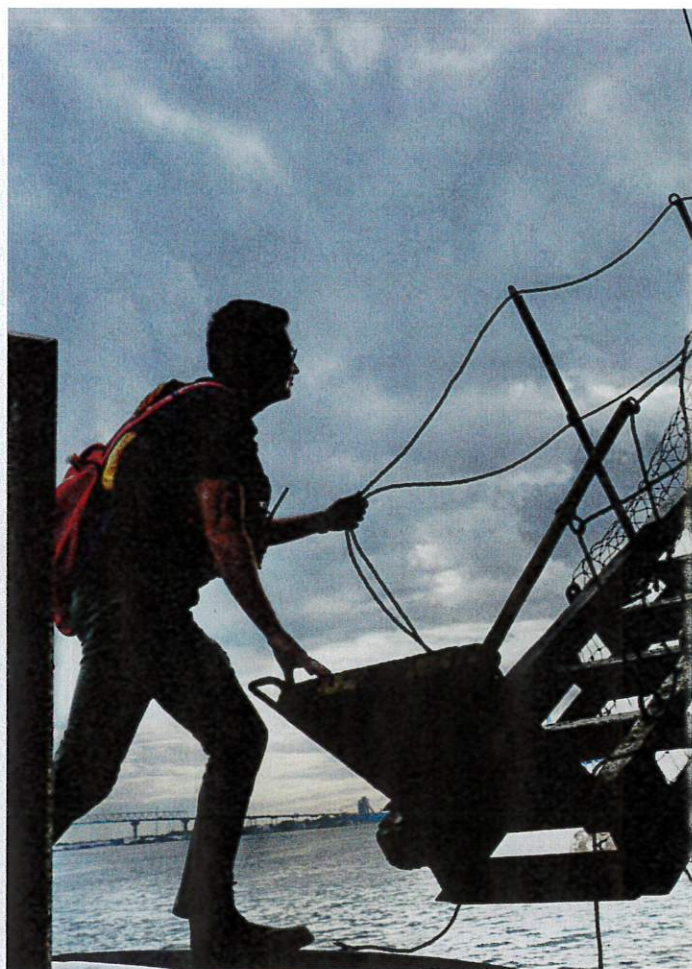
Given differences in state governments, legal systems, port operations, shipping traffic and waterways, there is no one “right way” to administer a pilot licensure program. No matter how effective a program may be in one state, it may not be equally effective elsewhere. Pilotage is an inherently local matter; pilot selection, training and licensing schemes must be based on the unique needs of each pilotage area.

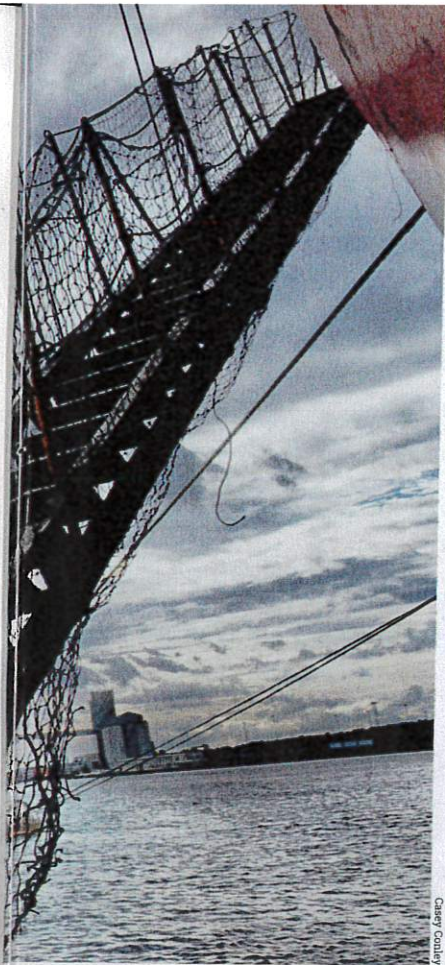
Under federal law, each U.S.-flag coastwise vessel is required to use a pilot who holds a U.S. Coast Guard-issued federal first-class pilot endorsement (FCPE). The FCPE has much lower qualification requirements than a state license (e.g., no demonstration of conning skills is necessary, only 12 to 20 round trips of pilotage waters is required, and the only recency requirement is one transit of the pilotage waters every five years).

In state pilot apprentice programs, obtaining an FCPE is either an entry-level requirement for initial selection or one of the many steps in such a program preparing an individual for an eventual state license. Since each state-licensed pilot also holds an FCPE, however, much of the so-called “federal pilotage work” is conducted by state-licensed pilots.

What it takes to become a state-licensed pilot

Each coastal state has taken the authority granted by Congress and fashioned a comprehensive training and licensing system tailored to the local port





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competitive examination or extensive testing, interviews, a college degree and substantial maritime experience.

- Pilot trainees undergo multiyear apprenticeships and extended route-specific training.
- Classroom, simulator and manned model instruction is also part of state pilot training programs.
- Licenses are frequently issued in stages, with pilots progressively earning licenses that permit them to pilot larger and larger vessels.
- Pilots are subject to rigorous medical fitness standards.
- Pilots must meet periodic recertification and continuing education requirements.

Selection of pilot licensure candidates

conditions and navigational demands. While there are variations in the approaches states take to the selection and licensing of pilots, these programs generally consist of the following core attributes:

- Licenses are issued by a government regulatory body, usually called a pilot commission.
- The selection process for a pilot training program generally requires a

Due to different local conditions and navigational demands, there are variations in how states select candidates for potential licensure. There are, however, some common features. For instance, many states utilize interviews, various types of testing (e.g., aptitude, professional knowledge, etc.) or a standardized exam to screen candidate pools.

In addition to seeking to narrow applicant pools, states frequently look



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Above, the Virginia Pilot Association launch *Hampton Roads* comes alongside a containership off Virginia Beach. Below, Virginia Pilot Capt. Jay Saunders demonstrates the vessel's features. Opposite page, Capt. Doug Logan of the Charleston Branch Pilots prepares to board a ship.

for different types of applicants. Some states prefer applicants from sectors of shipping that form a significant part of their ports' shipping traffic, while others look for applicants from a wide diversity of shipping types. Some states prefer to select well-seasoned mariners with senior MMCs who can become fully licensed pilots after relatively short apprenticeships, while other states look for less maritime experience in an applicant but impose much longer apprentice training.

Training and apprenticeship programs

All states require a formal apprentice program where future pilots learn their craft under the tutelage of fully licensed pilots. Apprenticeships vary from one to three years for mariners with advanced MMCs, or up to seven years for mariners with less experience.

Since pilots must have an

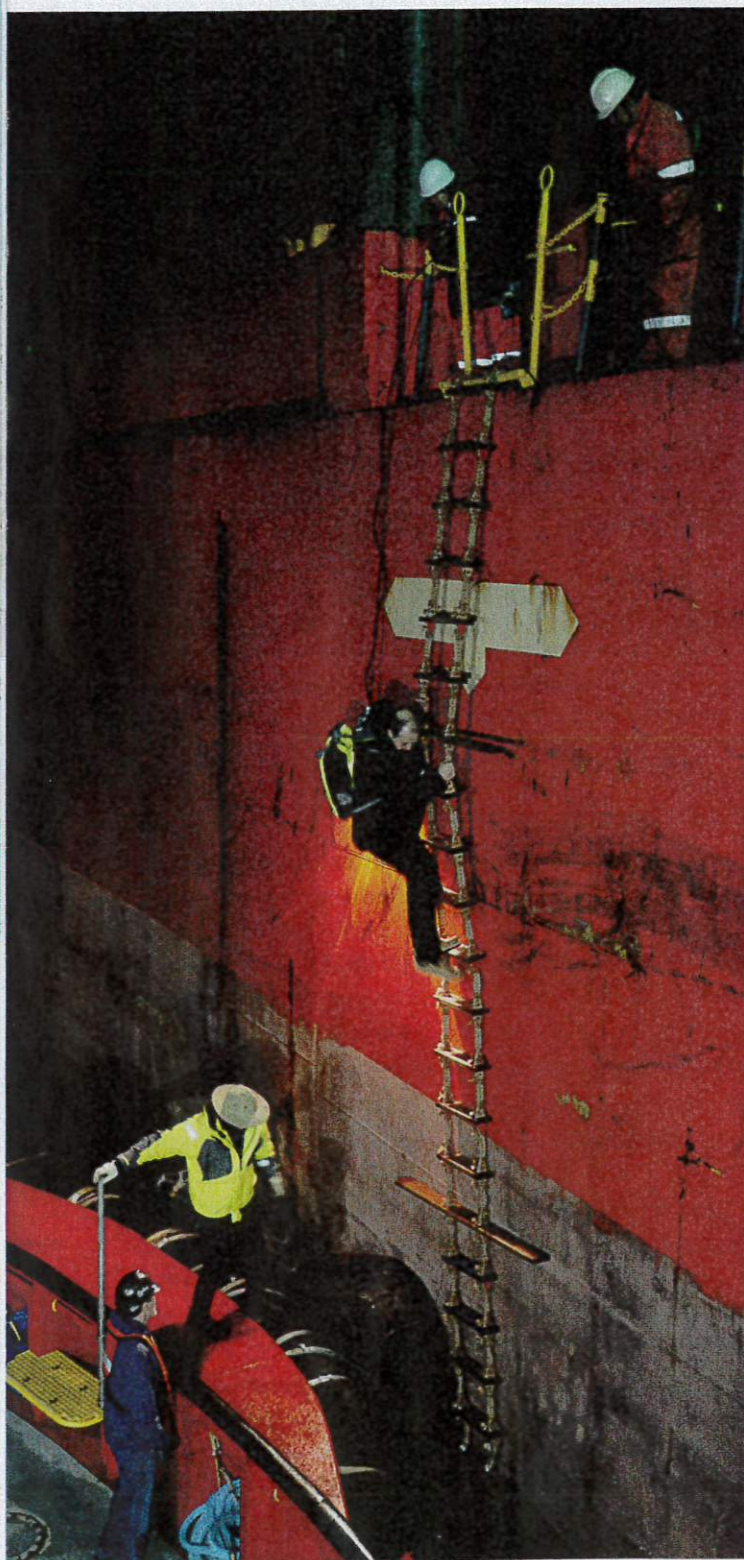
unmatched knowledge of pilotage waters, navigational peculiarities and local regulations, in addition to being able to conduct themselves on ships with bridge teams coming from all over the world, apprentice programs include numerous instructional trips through pilotage waters. This entails hundreds or even thousands of trips over pilotage waters under the guidance of senior pilots. The number of trips must be enough to ensure the pilot trainee becomes proficient at all different pilotage assignments, on all different types of vessels and under all weather conditions. There is simply no substitute for this intensive on-the-job training.

In addition to a rigorous apprentice program, intensive classroom study is also a key feature of state pilot training programs. Classroom topics include basic, advanced and emergency ship handling; radar and electronic navigation; fatigue; and bridge resource



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Puget Sounds Pilot Capt. Eric Von Brandenfels, middle, prepares to assist pilot trainee Capt. Matt Miller back onto the Crowley tugboat *Guard* in Seattle. *Guard* engineer Randy Walker stands ready to help as needed.

management training for marine pilots (BRM-P). This required classroom work is supplemented with simulator and manned ship model training.

Licensing of marine pilots

The license-issuing process for state pilots frequently proceeds in stages. After completing an apprenticeship, a pilot commission may issue an individual a "deputy pilot" license or a class of license that authorizes the person to pilot vessels up to a certain draft, length or tonnage. A commission may authorize numerous classes of pilot licenses, with the lowest level being for the smallest vessels calling at a port and the highest level (i.e., a full pilot license) being for the largest ships. It can take several years, in addition to the years spent in an apprenticeship program, to attain a full pilot license.

In order to maintain their licenses, fully licensed pilots are required to periodically take specialized training and education courses. A typical state-level continuing education standard for pilots requires a specified number of hours of approved courses be completed every three to five years.

How have training requirements changed over the years?

As discussed above, to supplement both initial and recertification training, pilots routinely receive instruction on state-of-the-art bridge simulators and precisely scaled manned models. Simulators and manned models allow pilots to safely gain valuable experience under the most extreme conditions. Marine casualty case studies, a common and effective part of pilot classroom work, have also been enhanced through technology by allowing easy AIS and voyage data recorder (VDR) playback of

actual accidents.

In carrying out their duties, pilots use all resources at their disposal, including portable pilot units and the navigation technologies available to them on the ship. As a result, pilots are trained in the latest types of navigation equipment and continually reevaluate how such advanced technology can be incorporated into their piloting practices. Pilots are rightly expected by oversight authorities to remain current in the latest navigation technology and practices.

Because pilots have an unparalleled knowledge of the waters upon which they operate, they are not wholly reliant on technology. Pilots are expected by their regulatory bodies, as well as the general public, to use all means available to them. This includes traditional visual piloting techniques and aids to navigation, but navigational technologies are important tools at pilots' disposal.

"The economic and environmental risks posed by today's maritime operations, combined with the reality that ships are growing far faster than shipping channels, make pilots more important than ever," said Clay Diamond, APA executive director and general counsel. "Given the critical safety role pilots will continue to play in 21st-century shipping, there is understandably interest in how pilots are trained, licensed and recertified."

Capt. Jorge Viso has been president of the American Pilots' Association since 2017. Previously, he worked as a harbor pilot for the Tampa Bay Pilots Association for more than 26 years.

Clayton Diamond is executive director and general counsel for the APA. Prior to joining the organization, he served for 24 years in the U.S. Coast Guard.