

The Houston Pilots: Guardians of the Waterway

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Every day, Houstonians drive over the bridges above the Houston Ship Channel, glancing occasionally to see the ships and their cargos, and then turn back to focus on traffic without giving much thought to how those ships got there. Each year, more than 20,000 ships and 230,000 barges carrying some 240 million tons of cargo negotiate the 56-mile long, 535-foot-wide channel to produce an estimated one million Texas jobs and \$56.5 billion in personal income and consumption expenditures.¹

But what would happen to Houston if those ships could not reach the docks? Or if ship captains attempted to navigate the winding, narrow waterway lined with petrochemical plants without knowing the water's depth and currents, the shoals, the tides, the clearance under the bridges, or how to maneuver around passing vessels?

Houston is often called the town that built the port that

built the city. The measure of success, however, should not be in the building of what has become the nation's largest inland port but rather in the hundreds of thousands of ships the Houston Pilots have quietly and safely guided along the channel for ten decades. Steve Huttman who manages a fleet of Gulf Coast harbor tugs notes, "In order to bring a vessel into port, you have to have that pilot with their unique experience to bring the vessel in, with [its] handling characteristics, understanding the channel . . . The pilot's the conductor, telling our tug master where to go and where to get ready, and what the plan of attack's going to be."²

Pilotage is one of the world's oldest professions and can be traced back to the earliest vessels that crossed bodies of water for exploration, trade, and conquest. Houston Pilot Captain Holly Cooper explains, "A pilot's job is local knowledge, to safely bring vessels in and out of harbor."³ While that mission remains unchanged, the complexity of the job and who can become a pilot has changed dramatically.

Early Houston Pilots

In 1838 Sam Houston approved the Republic of Texas's first law regarding pilots, which enabled port collectors to oversee pilots in their respective ports. By 1842 laws became more specific. For example, the Port of Galveston collector prohibited pilots leaving the Galveston Bar for more than twenty-four hours without consent or from leaving a vessel waiting outside the bar for more than four hours. In 1846, the Texas governor began appointing pilots.

When the Houston Ship Channel opened in 1914, it was "marked by eleven lights, tended by members of the U.S. Lighthouse Service, who could light each oil lamp by hand



from a rowboat.” In 1916, Governor “Pa” Ferguson appointed L. Fred Allien and J. William Laughton as the first two branch pilots for the Port of Houston and Galveston Bar. Captain Roy Murray, a Houston Pilot from 1950 to 1984, noted that early on, “the Chamber of Commerce of Houston furnished pilots for free to encourage ships to come here.”⁴

In 1921 with the help of Congressman Tom Ball, the Houston Pilots approved Articles of Association that enabled them to “remain independent contractors conducting business together.” To account for their work, they had cards filled out and signed by the ships’ masters that noted their ships’ size and the time the pilots served on board. The pilots pooled their fees and often had to call on shippers to collect them.⁵

Since its inception, the Houston Pilots has assigned unit numbers to identify each new pilot as he or she comes into the organization. To date, the count is 220—not many for ninety-three years of service. New pilots become equal owners of the company once they complete their terms as deputies and are voted in as full pilots. All pilots hold an equal share of ownership without regard to seniority.⁶

In 1930 with increased traffic on the channel, the Houston Pilots proposed “Rules of the Road” that include procedures for passing ships at the wharf, approaching another ship in the channel, and whistle signals for various eventualities. Bigger changes came during World War II, however, when the channel operated around the clock. Forty-five companies along the channel had government contracts to supply jet fuel, synthetic rubber, petrochemicals, and other military necessities. With German U-boats regularly attacking U.S. shipping interests in the Gulf of Mexico, the


Houston Pilots voted to accept commissions in the Coast Guard and put their craft under its control to keep the channel open and cargo moving.⁷

Becoming a Pilot in the Post-war Era

In the 1950s Houston had a shortage of pilots, who at that time worked thirty days on and fifteen days off. Deputy pilots trained under one master pilot but rode with all the pilots to get the benefit of their unique experiences. Initially they trained for one year, but that changed to two years in 1975 and three years in 1997 with about 1,000 transits, a reflection of the job’s growing complexity. The Houston Pilots today take an equal mix of blue water candidates—those from ships—and brown water candidates—those from harbor tugs, push boats, and dredges. They pair deputies and masters from opposite backgrounds, blue to brown for example, to maximize the overall insight deputies gain.⁸

Deputies begin by observing, but they also get experience talking to the tugs and tows to build the all-important relationships they will need to be effective. Houston Pilot Captain Sherri Hickman explains that when the deputies begin piloting, they are assigned to ships small enough for them to handle so they can learn their way up and because they are training on the license of the master pilot who is responsible for any mishaps.⁹ By riding with different pilots, they get to know each pilot’s method of docking and undocking a vessel and the intricacies of working in the close quarters of the Houston Ship Channel. As Captain Cooper notes, “We have something that we say on the channel—no hits, no runs, no errors—and that’s basically true.”¹⁰

Another important aspect of training is to make new pilots aware that the job is challenging and involves long



This photo, “Little Ship Stories” by Houston Pilot Captain Lou Vest, illustrates the vast difference in the types, sizes, and ages of ships that pilots navigate up and down the Houston Ship Channel. Vest explains, “The way we work is that jobs are assigned to the next pilot on the list. Sometimes you get a big one, sometimes a little one. . . . Guess which ship was probably the easiest job? The big one. They give you as many tugs as you want to dock them. The tugs are the best in the fleet. Everyone calls you up way in advance and offers to get out of the way and takes care to be well on their side of the channel. On the small ship tugs are a luxury.”

All photos courtesy of Captain Lou Vest unless otherwise noted.



After World War II, the Houston Pilots purchased and refurbished a subchaser that became Houston Pilot No. 2. Intended to make the wait on the bar more comfortable for pilots, the air-conditioned boat was a step up from the group's World War I model. Nicknamed "Old Wormie," it measured 110 feet long and had two diesel engines that generated 1,000 horsepower. Unfortunately, it also leaked rusty water on the sleeping pilots.

Photo courtesy of the Port of Houston Authority.

hours, and at times might even be boring. Captain Cooper said, "If you don't enjoy the job, then you won't be a good pilot." They must have a positive attitude, refrain from holding grudges, and "treat everyone on every ship as [their] brother or sister."¹¹

Training also involves the use of simulators, manned model training, and instruction in technology. Until the 1960s, pilots' only means of communication were whistles and hand-held megaphones. Captain Murray recalled, "We used to blow a long whistle and listen if there was another ship, because there was a place you couldn't pass." He adds that two-way radios later enabled pilots to communicate bridge-to-bridge, solving a lot of problems. Even into the 1990s, pilots had radar but still had to guess at things, particularly in bad weather. Today pilots come aboard with their own laptops that have a GPS unit to show them where other vessels are or will be. The Automated Identification System (AIS), used by pilots, ships, and the Houston Pilots dispatch terminal, shows ships identified by size and cargo, as well as other vessels. Pilots can also get information from the Coast Guard's Vessel Traffic Service (VTS), which monitors the entire waterway.¹²

Even with this technology, one element of the training remains firmly dependent on human memory. Every pilot must be able to draw the entire fifty-six-mile channel complete with surrounding geographical features to within a millimeter's accuracy. The Houston Pilots presiding officer, Captain Michael A. Morris explains that trainees must mark hundreds of navigational aids, water depth, docks, and shallow areas around the channel.¹³

On the Job

Pilots work fourteen days on and fourteen off, usually handling two ships daily. Captain Cooper describes a typical scenario. She boards the ship from the gangway and goes to the bridge where she takes over command. (The captain retains the right to override the pilot at any time at his own risk.) She has tug boats come alongside, the vessel is untied, men on the dock take the lines, and she gives the engine

orders, speed, and direction port or starboard while the tug boat pulls the ship off. Once under way, the ship is either turned around or headed outbound on the channel. It can take as long as ten hours, which is rare, to as little as four and a half hours to reach a point about ten miles offshore where she disembarks onto an awaiting Houston Pilot boat. It comes up alongside, with both vessels making about ten knots, and she climbs down the ladder and steps onto the deck of the pilot boat, which is equipped with living quarters so pilots can rest from thirty minutes to several hours while they wait to board their next inbound ship.¹⁴

Transferring off and on the ship via the ladder from two feet to thirty feet, Cooper points out, is the most dangerous part of the job. Both ships are moving, the ladder is "pretty rickety," and the pilot depends on someone to have secured it properly on deck. Emphasizing that pilots board in all types of weather and all types of current, Captain Morris says, "We work 24/7/365 in a hostile environment created by high seas, strong winds, and extreme temperatures. In this country alone, we lose one pilot every year. Somebody dies climbing up or down the Jacob ladder hanging down the side of the ship." Every day, one of the 1,300 to 1,400 pilots in the United States is injured on the job. He points out, too, that ships have gotten larger and cargoes more valuable, adding to the job's stress level, "If we make a mistake, we run the risk of losing our license, our freedom, or our life."¹⁵

Twenty years ago Houston Pilots moved about twenty ships a day, now it is closer to sixty. Captain Lou Vest explains, "In the 1990s, society in general experienced a growing awareness of fatigue and its relationship to safety." Before that it was considered part of the job. After undertaking one study and considering a second, the Houston Pilots implemented changes that included a minimum number of pilots on watch, raising the maximum number of pilots for piloting a ship mandated by port commissioners, and a fixed amount of rest time after extended periods of work, coupled with an earlier decision to assign two pilots to reduced-visibility ships. Houston remains one of only three pilot groups that stay on station to get their rest, due



Transferring on and off of ships is the most dangerous part of the pilot's job. Captain Lou Vest describes this photo as a metaphor for being a pilot, "Strange ship, middle of the night, and the unknown crew and ship in the dark at the top of the gangway." In 2009, the year he took this photo, four U.S. pilots lost their lives getting on and off ships.

to the length of the channel and the time it takes to reach the offshore anchorage.¹⁶

One thing that the Houston Pilots cite as unique to this waterway is the method they have developed to accommodate two-way traffic. The Houston Ship Channel is, Captain Morris notes, the only place where "two Suezmax ships 165 foot abeam" meet each other in a 500-foot channel. He always asks ship captains if they have been to Houston before, and if not, he draws them a diagram of the maneuver called the Texas Three-Step, saying, "This is going to look ugly, but it is going to feel good." The ships approach head on until they get within about half a mile of each other. The pilots order their ships to steer a few degrees to starboard taking into account the size and draft of the oncoming ship. As the bows approach the ship's increase their engine speed, giving them a "kick" that keeps them apart, and then the pilots steer back to the middle of the channel.¹⁷

Women Pilots Join the Ranks

Across the U.S., pilotage remained a profession for white men until the late twentieth century. In 1983 Captain Paul Brown became the first African American Houston Pilot and the second in the nation. By 2001 the Houston Pilots led the way in hiring minorities and women, and a few years later it formed a nonprofit, Anchor Watch, to offer scholarships to maritime students in need and boost opportunities for minority and women candidates.¹⁸

Being one of the first to tear down barriers is never easy, but for those who have a passion to pursue their dream, that does not deter them. Such is the case for Houston Pilots Captain Holly Cooper and Captain Sherri Hickman. In May 1994, Cooper and Hickman became the first women voted into the Houston Pilots, but Cooper started training sooner.¹⁹

An Austin native, Captain Cooper was the middle child of three girls in her family, and "the most adventurous and wayward." She frequently skipped school and her father saw her becoming a beach bum, spending her time surfing, scuba diving, and sailing. Despite only showing up for tests, she made good grades and eventually followed her father's suggestion to pursue a maritime career. Her parents were "pro-education" and encouraged their children to choose any field. Cooper spent a summer at Massachusetts Maritime Academy and eventually enrolled at the Texas A&M Maritime Academy in Galveston. The academy had few women students and no housing for them, so she lived on the *Texas Clipper*, the university's merchant marine training vessel.²⁰

Cooper navigated her way from the academy to sailing on ships as third mate, second mate, chief mate, and, eventually, captain with an unlimited masters ticket—the highest level one can achieve in the United States. She sailed for twelve years, first on Panamanian and Norwegian-flagged ships and then on U.S.-flagged ships as opportunities opened. Almost always the only woman, Cooper remembers the ships were usually about 800-feet long with twenty-six people on board. "It was a very small society, so you had to



Captain Holly Cooper joined the Houston Pilots in 1994 as the group's 151st pilot and the first woman to begin training as a deputy. For stress relief, she takes to the air, flying her own plane. She recalls the excitement she felt after Hurricane Ike when she had the chance to combine her love for the water and the air as pilots were ferried back and forth to their ships on helicopters.

Photo courtesy of Captain Holly Cooper.

carry your weight,” she observes. Although Cooper hates to admit it, women often had to do more to prove themselves. “Women were brand new in the maritime industry back then, and it was unheard of. You did the best, you tried to be the smartest, you tried to be the best at what you did, and you tried to get along with everybody. That was the essential part, to get along with everybody.”²¹

After waiting eight years to be accepted by the Houston Pilots, Cooper went through the two-year pilot training program under Houston Pilot Captain C. C. Lary III. Once she became a pilot, the most common reaction she received after being dropped off at a vessel by the pilot boat was to have the ship’s crew ask, “Where’s the pilot?” Or she would walk up the gangway and be mistaken for a “lady of the evening soliciting business.” Nevertheless, no ship captain has ever refused to let her take command because, as the pilot, she is the expert on the waterway. She has had many positive experiences as well. She recalls having a crippled ship and the harbor tugs, tow boats, and other pilots working with her to prevent a disaster. She adds, “There’s camaraderie in the industry that surpasses one’s sex.”²²

Houston Pilot Captain Sheri Hickman grew up in Pennsylvania and was fascinated by the ships she saw as her family crossed bridges on the way to visit her grandparents in New York. She decided at age twelve to be a ship’s captain, and her parents supported her in that dream, despite reservations about opportunities for women. She attended the Maine Maritime Academy and looked up to women like Deborah Doane Dempsey, the first female graduate who later became a Columbia River Bar Pilot. “I felt like I was riding on their skirt tails,” she says.²³

Hickman trained under Houston Pilot Captain Tom



Deputy Houston Pilot Captain Rebekah Martin training with Captains Larry Evans and Sherri Hickman. The Houston Pilots now has four women pilots. Perhaps one day the list will include Captain Hickman’s daughter Coronado, who is at the Maine Maritime Academy and hopes to follow in her mother’s footsteps.

Photo courtesy of Captain Sherri Hickman.

Gibson. She found her fellow pilots in Houston welcoming, adding, “They took me in as a partner; I never felt unwanted or [like I was] having to put my foot in the door and hold it open.” They wanted to train her properly because they knew they would meet her on the channel.²⁴

A former tanker captain, Hickman found ship captains hesitated to accept her. They skeptically asked how old she was. Her youth coupled with being a woman seemed to be a bigger concern than how she had reached this point in her career. At times, she had to put a stop to the badgering questions so it would not inhibit her ability to handle the ship. Even today, she occasionally will have someone helping her up the pilot ladder say, “Oh my God, this is my first time for a female pilot!” Hickman, who is surprised to still be hearing that after twenty years, quickly replies, “Well, this is your lucky day.”²⁵

Captain Hickman was almost seven months pregnant when she received a call in May 1994 inviting her to become a deputy with the Houston Pilots. They wanted her to come right away, but she said she had “some obligations to take care of” and could be there August 1st. Eventually she told them she was pregnant. The baby came on her due date, July 22nd, ten days later the family moved to Houston, and Captain Hickman reported for work when her baby was eighteen days old. Her husband, a marine engineer, quit his job and became “Mr. Mom.”²⁶

About five years after becoming a Houston Pilot, Captain Cooper became pregnant. Her fellow pilots thought she was merely putting on a few pounds, and she did not correct them. She climbed pilot ladders up until the last couple of months when she began shifting, which is moving vessels between the docks within the port, so she could walk up gangways. Most ship captains did not say anything, but she remembers one who was particularly “bothered by the fact I had been pregnant on his ship without his knowledge, believing that I had created some additional liability for his vessel of which he should have been aware.” Cooper adds that she has a wonderful husband who willingly acted as the primary caregiver to their son.²⁷

Recently two additional women have joined the Houston Pilots. Captain Kristi Taylor, a King’s Point graduate, became a full pilot on September 27, 2014. Captain Rebekah Martin, who graduated from Texas A&M Galveston, joined the organization as a deputy pilot in March and began handling small ships on her own in September.

For men and women, balancing the job’s demands is difficult, particularly while training. They go out and handle a ship, come home for twelve hours, and go right back out. “Basically you don’t have a home life for two weeks at a time,” Hickman observes. “You just come home to sleep and maybe offer advice.” Single deputy pilots face their own challenges because they do not have help. For example, Martin recently struggled to find someone to fix her hot water heater during the twelve hours she happened to be off.²⁸

Piloting Today

After 9/11 many changes occurred in American society and the Houston Ship Channel was no exception. The U.S. Coast Guard initiated more aggressive screening of vessels, increased security zones, and upgraded monitoring. Pilots



The pilot boat Bayou City comes alongside the outbound Saetta to pick up her pilot at the Houston/Galveston Sea Buoy while another ship waits in the distance for her pilot. One of the four Houston Pilot boats, the Bayou City is the station boat in the Gulf. It has eight small bunkrooms and a galley/TV room where pilots can eat, sleep, or read while they wait up to seven hours for an inbound ship. The double hull construction helps minimize the water's motion.

could no longer park on docks and were screened like any other port visitor. The port built fences, added cameras, and prevented seafarers from disembarking.²⁹

One thing has stayed the same: no sail on the channel is routine. Every ship a pilot boards is different, and every trip is different. A steering or engine failure could occur, a helmsman could go the wrong way, or an anchor drop unexpectedly. To prepare for any eventuality, Captain Cooper stresses, "You've got to be sharp-witted because we've got so much traffic." Besides the commercial traffic,

For all of those who think it is nothing but sunshine and calm seas on the Gulf Coast: "The First Norther of the Year" shows the pilot boat Bayou City on October 22, 2007, just outside the Galveston jetties in the pilot boarding area.



add to that fishing boats, pleasure boats, and the occasional hot-rodder.³⁰

An example of the unexpected occurred on the morning Hickman and I spoke. Each ship is required to have someone on the bridge who speaks English, which is the legal language of the sea. As Captain Hickman piloted a ship into port while it was still dark, she asked for a pair of binoculars to verify the boat she had seen in the distance was a sailboat. She asked, "Do you have binoculars?" The person replied, "OK," and then promptly unplugged her computer!³¹

Captain Cooper reflects, "You don't know what will happen [from one day to the next]. But that's also what makes this job so exciting and the reason why I love it so much."³²

For ten decades Houston Pilots have worked day in and day out acting as guardians on the Houston Ship Channel. Securing safe passage for thousands of vessels, they have protected lives, jobs, and the economy—enabling the port to build the city; still, most residents take their work for granted. Pilots work long hours in adverse conditions and yet one cannot help but sense it is they who feel they have been rewarded. Captain Hickman exclaims, "Is it worth it? Oh yes, it's worth it!"³³

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