



# How do they do it?

## Hawaii Pilots Association

by Captain Ed Enos

Hawaii is the only island state in the USA. Our islands are well known for the lush tropical beauty and most of all, some of the most pristine beaches in the world. Recently the famous “Dr. Beach” listed Haunama Bay on the island of Oahu as the best beach in America for 2016. Our islands have some of the cleanest waters, excellent for snorkeling and scuba diving. The beaches along Oahu and Maui’s north shore are home to the most epic surf breaks in the entire world, bar none. The deep waters off the Kona coastline are renown for the excellent world record bill-fishing tournaments each year. Our ocean recreation based tourism industry generates billions of dollars annually for Hawaii’s economy.

With this in mind, the members of the Hawaii Pilots Association (HPA) play a critical role in preserving the natural beauty of our coastlines and ocean waters throughout the entire island chain. Every ship that approaches Hawaii’s coastal waters represents a potential risk if something should go wrong, that could significantly impact Hawaii’s economy. Yet Hawaii as an island state, is entirely dependent upon shipping to maintain our daily lifestyle. The ocean transportation industry imports 98% of all consumer goods for Hawaii residents.

In 1794, the first European vessel found it's way through the natural narrow channel of Honolulu's protected deep water anchorage. British Captain William Brown was credited with naming this location “Fair Haven”, which loosely translates into Hawaiian as Honolulu. This central location between Asia and North America quickly became a popular stopping point for international commerce across the Pacific Basin. Within a few years, the savvy ruler of these islands, King Kamehameha I, quickly realized he could profit from the transiting ships by levying fees and charging for pilotage services. In those days, the act of piloting meant sailing ships being towed through the narrow passage within the coral reef into the calm protected waters by several outrigger canoes. Within a few decades, Hawaii became well known as the “Crossroads of the Pacific.”

Honolulu Harbor is the state's biggest commercial port. But while it may pale in comparison by size or volume of cargo handled at other ports around the world, no other is so vitally important to the survival of well over a million residents, in addition to the 7 million visitors each year. Most residents live on the main island of Oahu. As an island state, land is a precious and limited commodity, and very expensive to own. Too expensive that is, to simply have a warehouse full of several weeks worth of food and other consumer goods. The large container ships that arrive daily at Honolulu Harbor act as virtual warehouses. Everything local residents need to survive, arrives onboard a ship and is carried within an ocean shipping container.

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Containers are offloaded from arriving ships within minutes of coming alongside a pier, and placed directly on chassis' that get parked within a terminal. Truckers are waiting their turn at a gate to enter the terminal, grab their assigned container and head immediately to the cargo owner. In Hawaii's maritime transportation business, this is collectively known as “just in time delivery”. Most stores in Hawaii carry their inventory on their shelves. There is little (if any) storage at the back of any store.



Ships delayed during their voyage to Hawaii from extended cargo operations on the US West Coast, or bad weather, results in cargo not appearing on shelves in a timely manner, as scheduled. Further complicating this issue, are the local barges that patiently wait for their cargoes that are carried aboard ship. Any delays in the ship's schedule, usually result in delays in transshipment to the neighbor islands from the Honolulu Harbor hub. The timely logistics of our industry is vitally important to the daily lives of every resident in Hawaii. Sadly, most residents are wholly unaware of any of these issues...until their goods don't show up on the store shelves!





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Few people realize that the pilot members of HPA provide their services at seven different harbors on four different islands. Honolulu Harbor on the island of Oahu is our busiest commercial deep water port. It is the primary hub where most all cargo is imported to. From Honolulu, most containerized cargo and refined fuels are then shipped by barge to the neighbor islands. The majority of the Hawaii pilots live on Oahu and conduct most of their jobs there, primarily at Honolulu Harbor.



But our neighbor island harbors play a key role in each island's economy. For nine months a year, the islands of Hawaii (known to locals as "the Big Island"), Maui, Oahu, and Kauai each see a steady stream of large cruise ship traffic. During the summer season most all cruise ships leave their Hawaii itineraries behind and head north to Alaska. The summer months are typically our slow time of the year. In addition, we have a few cargo ships and LPG tankers that regularly call at each neighbor island port all year round.



HPA currently has eight pilots. In 2015 we had about 2,100 ship movements throughout the islands. This number has been slowly decreasing in recent years. This is directly attributed to the number of cruise ships that are repositioning to the new growing markets in Asia and Australia.

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Our peak ship traffic years were a decade ago when we would handle about 3000 movements annually. Again, this was in large part due to the growing cruise ship industry expanding into the Hawaiian Island market.

In the past we have operated with nine pilots, though our operation is structured to function with ten working pilots. We have just taken in one new Deputy Port Pilot or 'Trainee'. Our training program spans 4 years. While this may seem long to some other pilot groups, one must remember that training opportunities at some ports here are a challenge. One of our ports, Kawaihae on the Big Island (Hawaii Island), may only see five or six ships in one year.

Our pilots handle every type of vessel on the ocean. Our greatest number of routine transits involve container ships, tankers, bulkers, car carriers, and cruise ships. Most container ships are between 215-275 meters long. Most clean product tankers are about 180-200 meters LOA. Most people are rather surprised by the volume of coal that is imported here (for power generation) on ships that typically are 225 meters long. Finally, we routinely handle azimuth equipped cruise ships with a LOA of 295 meters.

Since we are located in the middle of the Pacific Ocean, one can think of Honolulu Harbor as a convenience store on a busy highway. Many ships in transit through our islands are merely stopping to take fuel, some provisions, change out crews, or pick up spare parts. Thus, we also take a handful of ships to an off-port anchorage each week. Some are here for several days, some for just a few hours.

We handle large yachts in transit from/to the South Pacific. We have a large number of Japanese fishery training vessels (with high school age students onboard) that frequently call at Honolulu throughout the year. These vessels typically are 60 meters or less and provide true ship handling opportunities for pilots! They are well maintained little ships, equipped with either CPP or fixed pitch single props. Frequently moved around Honolulu Harbor and assigned some challenging berthing arrangements, under windy conditions. Another unique type of ship that regularly calls at Honolulu Harbor are medium size "motherships". These are typically small tankers carrying diesel fuel (100-120 meters LOA) equipped with refrigerated ocean containers secured on deck. These vessels provide fuel and fresh provisions, along with spare parts and equipment needed by hundreds of foreign longline fishing vessels scattered all over the South Pacific. One mothership typically replenishes 'at sea' about 35 or 40 fishing boats over 6-7 weeks, before returning to Honolulu to reload.

Our commercial harbors at all islands have not changed much in the last century, in terms of size. Designed and built originally in the early 1900's, most of our neighbor island harbors have a limiting draft at about 9.8 meters. Honolulu Harbor has a max allowed draft alongside some piers of 12.2 meters.



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When these harbors were created a century ago, the largest inter-island steamers that sailed between the islands were typically about 115 to 120 meters long. Today we handle ships routinely that are twice that length, frequently with less than a meter of under-keel clearance.



The Hawaiian Islands are well known for our great year round weather. Our average daily temperature range is comfortably between 23 to 27 Celsius (73 to 81 Fahrenheit). While we rarely have any type of reduced visibility issues due to fog, the occasional intense rain squall may briefly cause a whiteout condition. But the most routine daily environmental challenge for local pilots at all ports is typically the wind. Hawaii experiences breezy North-East-erly trade wind weather at our latitude as expected. A normal day will see light morning winds around 10 knots. By 1000 the trades start to fill in around 15-18 knots. By early afternoon from 1200 to 1500 hours, 18-20 knots is not uncommon. But then as sunset approaches the winds back off again at around 10 knots or so through most evenings.

However, there are many days when we are challenged by the same NE trade wind pattern that are much more robust and blowing 20 to 25 knots all day and night, with far higher puffs to 30 to 35. There are seasonal winds that shift out from the south, during winter months normally. They typically are light (10-15 knots), but when they blow harder (20-25 knots) and for several days, sea conditions off Honolulu Harbor can become dangerous at the pilot boarding grounds, with arriving ships struggling to make any kind of lee to embark a pilot. Some of our neighbor island ports of course, have their own unique conditions.

On the island of Maui, the port of Kahului can routinely be subjected to winds upwards of 35 to 40 knots each day, blowing ships off the main pier with winds impacting the hull directly on the beam. Add in the expected monstrous winter swells pounding the northern coast (10 to 12 meters in height) creating tremendous surge conditions within the harbor and then this port becomes a place most shipmasters prefer to avoid altogether.

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Fortunately for the pilots and shipowners alike, we are blessed to have a stable a good harbor assist tugs available at most all of our ports. The primary assist tug provider throughout all the islands is FOSS.

Their fleet in Honolulu is comprised of four primary harbor assist boats. They are all ASD Z-drive tugs, from 36 Ton BHP up to 68 Ton. In addition to FOSS, there is another assist tug provider, P&M Marine, that has five very similar sized and strength assist tugs, with one tug located at each neighbor island port. Finally, Sause Bros. has one ASD tractor tug in Honolulu Harbor that is frequently called out to help.

Our established pilotage waters are relatively small, with short transits. But pilots are very engaged with entire maneuver, immediately upon boarding. After a brief "Master-Pilot Exchange" (MPX) with ship masters, we begin to constantly give engine orders and rudder commands. Then we start to manage tugs by VHF radio. For most arrivals, we proceed into our entrance channel (150 meters wide), With shallow coral reefs on both sides, then enter into Honolulu Harbor's main basin, slowing down all the while. Once inside, we bring the ship to a complete stop. We then typically spin the (container ship or tanker) vessel 180 degrees around and back these ships down a 150 meter wide channel towards their berth location. Some ships proceed straight into the harbor and are stopped and spun in a similar fashion in the basin further inside. Then maneuvered to their adjacent berth. Many vessels go straight to assigned berths and as expected, are spun around on departure.



*Star Princess aan kade 9, naast de Aloha-tower*

The channel between the two basins within Honolulu Harbor is about a 1/2 mile long. One of our more challenging jobs is transiting this channel, at night, with 20 to 25 knot winds (or more!) blowing on the beam of a vessel. This is a very typical job actually. Each week a 273 meter steam turbine container ship calls at Honolulu.



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The transit inbound and outbound routinely requires moving the vessel down this channel, with container ships berthed on one side, while a tanker or car ship is alongside the pier on the opposite side. During periods of high winds, the container ship is transiting down the channel at a controlled speed, so as not to cause the vessels on berth to be surging, due to hydrodynamic action of the water.



*1 van de 5 (!) stoomschepen van Matson in de haven van Honolulu. Dit is de SS Maui (1978) of haar zuster SS Kauai (1980)*

The breezy wind conditions may require the transiting ship to be maneuvering with 5 degrees of leeway, while the tractor tugs work to hold the ship's safe position. This might result in the separation between the transiting ship and a berthed ship being as little as 35 meters or so.

In most all cases, the vessels handled during their turn arounds are doing so in moderate winds (20-25 knots), with one (or two) assist tugs and a bow thruster (sometimes). The smaller of the two basins within Honolulu Harbor provides about 335 meters of clear space to turn a vessel with 273 meters in length. While tide and currents are not normally much to consider, breaking surf at our entrance channel during summer time 'south swells' can provide some challenging ship handling opportunities. Some ship masters have commented, the most rolling and yawing their vessels have experienced on a voyage have been within Honolulu's main entrance channel.

Our typical job may be on average about an hour or more from "pilot onboard" to "first line" time. But the 'Time on Task' from reporting to the office prior to arrival, preparing for the ship, heading out to board, doing the job, mooring, report back to office, then go home, can easily run a few hours. It is NOT uncommon for a pilot assigned to sail a ship on departure to be DELAYED by ongoing cargo operations for at least 20 or 30 minutes or up to as long as 2 or 3 hours. Sometimes, it can easily be much longer, pending more cargo and harbor traffic. Our small harbors do NOT allow for multiple simultaneous moves. Once one vessel is allowed to transit by our local harbor ship traffic controllers, all other vessels must stop and wait, until all channels and basins are clear.

Another unique aspect of our pilotage group is the frequency that we handle older steam turbine ships. Both US flag container liner companies MATSON and HORIZON LINES, that serve Hawaii from the US west coast, still operate several steam powered ships. These ships make up the bulk of our regular customers, bringing Hawaii residents all the consumer goods they use each day. So a pilot on duty working at Honolulu Harbor can assume he will handle a steam ship at least 2 or 3 times in a week. Likely more often. Handling a steam ship is a bit more challenging than conventional motor-ships. There is a lot more of "thinking in advance" going on aboard a steam ship, and timing as they say, is everything!

Another aspect of our work that we have been asked to comment on 'conning' the ship. We appreciate that almost every port around the world has their unique own style of piloting. Much of this is dictated by local rules and regulations, as much as the individual pilots involved. Here in Hawaii, we are piloting ships the conventional way, largely accepted throughout the USA. That is, we board the ship at the pilot station and have a brief MPX. When all is understood, the pilots then say, "The Pilot has the conn." And we begin navigating our way in, controlling the ship's rudders & propellers, conversing with shoreside local VTS, and also the assist tugs and other harbor traffic. All routine. The Master retains the "Charge" and ultimate authority. But we are driving the ship.

It's a system that generally works well, with the rest of the bridge team supplying info as needed or watching (and reporting) our actions as required. The Master maintains a greater overall view of what everyone else is working on together. He knows his ship and we know our harbor. We maneuver the vessel safely up to the berth, with the pilot continuing to work with tugs and bridge team to safely moor the ship. A similar pattern is fashioned for departure. We control the vessel's movements entirely, out of the harbor until we are safe and clear of the main ship channel, turn the conn back over to the Master, then disembark.



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However, while working onboard a cruise ship, there likely will be a change in this format. When the arriving vessel is about one ship's length from a pier, we turn the "conn" back to the Master as he will dock the ship himself, while we closely monitor his work. On departure, the Master will take the ship off the dock, maneuver out into the basin, and then we will take the conn from him and maneuver the ship out to the pilot station offshore to safe water. Before disembarking, we turn the conn back over to the watch officer.

Our pilots work a two week on-two week off rotation, with four pilots on duty. Each watch rotation, a different pilot(s) is assigned traveling jobs to the neighbor island ports. It is always something different with each job. We frequently fly from Honolulu to other islands. We also ride ships between each port, though usually this occurs aboard cruise ships. During busy cruise ship season, we will often just position a pilot (or two or three pilots) in different ports, staying at a local hotel. Every day while he is there, he will do a ship arrival in the early morning and then a departure in the early evening. He may be assigned to remain in a port for a few days at a time.

In Honolulu, our busiest port, each of the four "on duty" pilots are assigned every fourth job. As one pilot is assigned a job at another island and leaves Honolulu, the remaining pilots are then assigned every third job. And so on. If there is a concern or question about obtaining adequate rest, an off duty pilot is called in to do a "stand-by" job(s) until the regular on duty pilot is ready to go back to work. On a typical day, a pilot will pilot 2 or 3 ships within a 24 hour period.

Our office at Honolulu Harbor operates seven days a week, with our dispatchers working each day from 0700 to 1700. After 1700 our scheduling services are managed by the local FOSS (assist tug company) dispatcher. The FOSS dispatchers are on duty 24 hours a day to manage all calls for tugs needed for ship assists. Pilots on duty are expected to be available for work 24 hours a day and remain in constant contact with our dispatchers via cell phone. While our office at Honolulu Harbor is set up to comfortably accommodate pilots on duty, they are not expected to remain at our office between jobs. After completing a job, most all pilots go home. In general, most pilots live within a 30 minute drive or less from the harbor.

We have one pilot boat positioned in each port. In Honolulu Harbor we have two boats ready at all times. We operate our boats with one boat Captain and no deckhands.

We are frequently contacted by many young seafarers from all over the US who desire to live and work in Hawaii as a Harbor Pilot. Ah, such a life they think it is! And who wouldn't? But the reality is, Hawaii is a very

expensive place to live, in comparison to anywhere else in the USA. Most of all, in pursuit of a career as a pilot, the requirements to obtain a State Port Pilot License are challenging. To begin the process to simply apply for license from the State of Hawaii an individual MUST first possess:

1. A Master license, Unlimited Tonnage, All Oceans
2. Document 1 year sailing as a Chief Mate, on an unlimited tonnage vessel
3. USCG endorsement for First Class Pilot for all seven commercial ports in Hawaii; Hilo, Kawaihae, Kahului, Honolulu, Barbers Point Harbor, Nawiliwili, and Port Allen.
4. Complete 50 round trips of Honolulu Harbor, 10 trips at night.



This is a considerable undertaking, especially if you do not live here. Many of the current working, licensed pilots in HPA at one time or another, worked aboard ships that were carrying bulk sugar from Hawaii to the US mainland. Additionally, they briefly worked aboard some of the US Flag passenger ships that run between the islands. Some have put time in aboard the local tugs towing barges between the islands. But for those of us who were able to ideally work aboard ships that provided ample pilotage observing opportunities, this effort typically took several years of commitment in pursuit of this job. The cost of observing ship transits for pilotage located at harbors on the neighbor islands, can also mount up to a considerable expense, all paid for by the individual observer. Most USCG pilotage endorsements require 15 round trips, some at night, of local harbors.

Once an individual has met the above criteria, an exam is given (once every few years). The top score on each test is granted a Deputy Port Pilot License. That individual is then brought in to the HPA training program. After successfully completing the four year training effort, the individual is then qualified to work as a full share, unlimited Port Pilot at all harbors on his own.

Finally, no discussion of our organization would be complete without mentioning Captain Dave "Kawika" Lyman.



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Lyman was a founding member of the Hawaii Pilots Association in January 1979, when they started a private organization after separating from government service with the State of Hawaii. Lyman was well loved and respected by everyone within Hawaii's maritime industry. He was a hugely popular individual even beyond Honolulu's waterfront. He was generous to a fault. He always found time to stop and listen to anyone who would strike up a conversation with him, no matter where they were or what he was doing. It was not uncommon at all to find Lyman listening to a homeless man on the street in Honolulu's Chinatown, begging for a cigarette. Ten minutes later Lyman would be sitting at the bar at Murphy's, sharing a cold beer with the President of a local bank. Frequently seen on TV or heard on local radio, Lyman was always consulted on 'anything' to do with maritime affairs. He was the "voice of Honolulu's waterfront."



So it was stunning news to everyone in Hawaii when he was lost to the sea in January of 2006. Lyman was piloting the cruise ship ISLAND PRINCESS out of Nawiliwili Harbor on the island of Kauai. Nawiliwili Harbor has a challenging entrance channel and is frequently buffeted by high winds and ocean swells. But on this day, the winds and seas were like any other, not necessarily rough, but conditions were described as "normal". The ISLAND PRINCESS was a 294 meter cruise ship, a regular customer the pilots were very familiar with. She frequented the Hawaiian Islands often, with a good Captain and crew. And this day seemed like any other.

After safely departing the harbor, Lyman made his way down to the side port door, as he had done so many times before. He stepped out onto the pilot ladder, eased himself down a few rungs, and waited for the boat to come up under him against the ladder. Moments later, after having his feet bumped by the pilot boat fendering, Lyman fell backwards onto the deck of the boat, then instantly fell forward, this time into the water. The boat operator put the engines in neutral as fast as humanly possible. It was too late.

He was recovered a few minutes later, still conscious. It took only a few minutes more, but by the time he was brought back to the dock, he was unconscious. He was pronounced dead later at the hospital.

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By the next morning, everyone on Hawaii's waterfront knew of the accident. As the day dragged on, the Hawaii Pilots office was swamped with phone calls, emails, and faxes, from other pilots and mariners all over the Pacific, from as far away as the East Coast of the US, even from friends in Europe. News of Lyman's death stunned everyone. A week later, his services were held at Honolulu's Central Union Church to a standing room only crowd, with well over 1000 people spilling out of the church onto the surrounding lawn. His ashes were scattered at the pilot station off Honolulu Harbor. The size and number of the parade of commercial vessels and boats had never been seen before in the history of Hawaii. This traditional maritime ceremony, attended by hundreds of people aboard dozens of vessels, made the full page cover of Hawaii's Sunday morning paper.

The end of an era had arrived with "Kawika's" passing. For those who would like to learn more and perpetuate Lyman's love of the ocean and efforts to help young men and women be part of this industry, you can visit this website;

[www.davelyman.com](http://www.davelyman.com)

Those who wish to learn more about the Hawaii Pilots Association can visit our website at:

[www.hawaiipilots.net](http://www.hawaiipilots.net)

You can find our office location in Honolulu Harbor by searching us on google maps.

Our office in Honolulu Harbor is a modest affair. But our employees on duty share in the 'aloha spirit' and always welcome any pilots visiting Honolulu. Feel free to stop by and say hello, have a cup of coffee with us.

Captain Thomas Heberle is the current President of the Hawaii Pilots Association. He can be reached anytime through our office. Our contact information is available on our website.

**Capt. Ed Enos** has been a member of the Hawaii Pilots Association for 22 years. Born and raised in Honolulu, Hawaii, he is one of the few Part-Hawaiians Pilots in the history of the Association. He graduated from the California Maritime Academy in 1987. Prior to becoming a Harbor Pilot, Enos sailed all over the world aboard deep sea commercial ships including tankers, bulk cargo ships, break-bulk freighters, container ships, research vessels, and passenger ships. In between deep sea jobs, he frequently worked during his vacation periods aboard local tugs in Hawaii running between the islands. Enos is licensed by the US Coast Guard and currently holds his 5th issue of his Master Unlimited, Any Ocean license, endorsed for First Class Pilot for all Ports in the Hawaiian Islands, and Master of Auxiliary Sail Vessels-100 Tons.