



January 21, 2019

Chair, Vice Chair & Senators of the Committee:

Sail Maui has been a proud member of the Maui community for the past 25 years and has three vessels that are kept on a mooring full time. In light of global climate change, longer hurricane seasons, and an increase in the strength and severity of storms, we are very much in favor of the Ocean Tourism Coalition's stance that DOT Harbors should support the long-standing policy of making non-critical areas available for vessels under 200 tons during inclement weather.

Kahului Harbor is on the leeward side of the island during a storm from the south and thus offers a substantial amount of protection. Vessels moored on the island's south and west shores have previously been welcome to seek shelter in Kahului Harbor on the North shore and this has been the prevailing policy for the last three decades. However, during Hurricane Lane, when a deadly category 4 hurricane was headed straight for Maui's south facing shores, DOT Harbors Maui District Manager put out the order that, "All vessels, regardless of size, that have not already received express permission by USCG and DOT-Harbors to remain in port, are hereby ordered to depart Kahului, Kaunakakai and Kaunakakai Harbors..."

As stated by the OTC, "For the safety of the crew members and their family members... Running offshore from an approaching hurricane is a foolish plan. Vessels can be repaired or replaced, but the spouses and families of crew will never be able to replace lives lost to a hurricane. "

Sail Maui strongly supports the following Bill submitted by the OTC to be added to Hawaii Revised Statutes, Section 266-2:

"§266-2 Powers and duties of department. (a) The department of transportation shall:

...

(8) Make harbor facilities temporarily available as a harbor of safe refuge to small vessels under 200 gross tons when the United States National Weather Service forecasts a Tropical Storm (more than 38 mph) and/or Hurricane Strength Cyclones (more than 73 mph), unless specifically prohibited by the USCG Captain of the Port. Small vessels shall be moored in non-essential areas and be clear of harbor channels whenever possible.

Please consider the above Bill for introduction into the 2019 Legislative Session.

Sincerely,



Don Prestage



COMMITTEE ON TRANSPORTATION
Senator Lorraine R. Inouye, Chair
Senator Breene Harimoto, Vice Chair

Date/Time of Hearing: January 23, 2019, 11:00 AM
Agenda: Harbors Informational Briefing

“Property as compared with humanity, ...must take second place, not first place.”
--Woodrow Wilson

Chair, Vice Chair & Senators of the Committee:

The OTC represents over 300 small ocean tourism businesses state wide. In August 24, 2018, Hurricane Lane, a deadly Category 4 Storm, was heading directly for Maui's South shores. Vessels in the Maui fleet immediately began preparations to take safe harbor on the North shore, in Kahului Harbor. However, on the eve of Hurricane Lane, the Department of Transportation denied vessels entry into Kahului Harbor, and sent Hawaii residents into dangerous offshore storm conditions.

In the past, if a hurricane was heading for Maui's South shores, vessels moored on the South shore would travel around Maui to seek shelter in Kahului Harbor on the North shore. Kahului Harbor is on the leeward side of the island during a storm from the South. This same emergency protocol has been follow for 30 years. However, as stated above, DOT Harbors Maui District Manager ordered that no that “all vessels, regardless of size, that have not already received express permission by USCG and DOT-Harbors to remain in port, are hereby ordered to depart Kahului, Kaunakakai Harbors....”

Maui has a large fleet of approximately 100 vessels permanently moored offshore. Our two main small boat harbors are Ma'alaea and Lahaina. During a storm, perhaps a dozen boats can take refuge in each harbor. That still leaves 75 boats with no harbor of safe refuge. The USCG wisely understands the danger of leaving its small craft in Ma'alaea and Lahaina Harbor during a storm from the South, and the USCG move their vessels to Kahului for safety.

These are just the stories from Maui, and we understand many other vessels were also ordered out of Honolulu Harbor.

For the safety of the crewmembers and their family members, DOT Harbors should support the long-standing policy of making non-critical areas available for vessels under 200 tons during storm weather. Running offshore away from an approaching hurricane is a foolish plan. Vessels can be repaired or replaced, but the spouses and families of crew will never be able to replace lives lost to a hurricane.

In furtherance of that goal, OTC submits the following Bill language to be added to Hawaii Revised Statutes, Section 266-2:

"§266-2 Powers and duties of department. (a) The department of transportation shall:

...

(8) Make harbor facilities temporarily available as a harbor of safe refuge to small vessels under 200 gross tons when the United States National Weather Service forecasts a Tropical Storm (more than 38 mph) and/or Hurricane Strength Cyclones (more than 73 mph), unless specifically prohibited by the USCG Captain of the Port. Small vessels shall be moored in non-essential areas and be clear of harbor channels whenever possible.

Please consider the above Bill for introduction into the 2019 Legislative Session.

Sincerely,

Zachary LaPrade, Member



**Passenger Vessel
Association**

103 Oronoco Street, Suite 200
Alexandria, VA 22314

Phone (703) 518-5005
Fax (703) 518-5151
Toll Free 1-800-807-8360

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www.passengervessel.com

January 22, 2019

The Honorable Lorraine R. Inouye
Chair, Committee on Transportation
Hawaii State Senate
State Capitol
415 South Beretania Street
Honolulu, HI

Dear Senator Inouye:

The Passenger Vessel Association (PVA) – the national trade association representing owners and operators of U.S.-flagged passenger vessels of all types – thanks you for scheduling the Transportation Committee’s Informational Briefing on the proper emergency protocol and procedures for Hawaii’s harbors and harbor users should potential disasters threaten the State and for demonstrating an interest in the protection of commercial passenger vessels when hurricanes and tropical storms strike.

PVA’s membership includes 21 companies operating passenger vessels in Hawaii. We are concerned about the policy change that was abruptly put in place last year that appears to preclude our members from seeking refuge in commercial harbors under the jurisdiction of the Department of Transportation. PVA urges the Transportation Committee to lead the way in re-establishing a policy that protects Hawaii’s passenger vessels and their crews when hurricanes and other severe storms threaten the islands.

The smaller harbors in Hawaii from which most PVA members operate do not provide sufficient protection for those vessels when severe weather strikes. It is necessary to move the vessels to more sheltered locations, and for many years these movements were allowed. PVA knows of no instances in which there were adverse impacts on the commercial harbors under the jurisdiction of the Department of Transportation when these emergency relocations took place.

Throughout the United States, it is standard practice for passenger vessel operators to move their vessels to sheltered locations when a hurricane is bearing down upon their customary harbors of operation. It is not standard practice for these vessels to move into the open sea to ride out hurricanes. Most U.S.-flagged

passenger-carrying vessels have a tonnage of less than 100 gross tons; as relatively smaller vessels, they do not have the seakeeping characteristics needed to endure hurricane or tropical storm conditions at sea. Forcing such vessels out of sheltered harbors jeopardizes the vessels and especially creates a life-threatening situation for the crew members.

The Passenger Vessel Association urges the Hawaii Senate and the executive branch to consult with your state's passenger vessel operators to make available the commercial harbors under the jurisdiction of the Department of Transportation to serve as a harbor of refuge in the event of hurricanes and tropical storms. Thank you for your consideration.

Sincerely,

A handwritten signature in cursive script, appearing to read "Robert J. Lawler Jr.", written in black ink.

Robert J. Lawler Jr.
President - 2019

Vessel Members in Hawaii
Passenger Vessel Association

Atlantis Submarines Hawaii, LLC

Blue Dolphin Cruises

Captain Andy's Sailing Adventures

Fair Wind, Inc.

Holo Holo Charters, Inc.

Hone Heke Corporation *dba* EXPEDITIONS

Island Star Excursions

Kanoa Inc. *dba* Body Glove Cruises

Kona Sunrise Charters, Inc.

Maui Classic Charters

Mid Pacific of Hawaii, Inc.

NaPali Sea Tours Inc./Horner's Inc. *dba* Kauai Sea Tours

Ocean Joy Cruises, Hawaii

Pacific Whale Foundation

Pier 36 LLC

Pride of Maui

Quicksilver Charters

The Lahaina Cruise Company

Trilogy Excursions

Star of Honolulu Cruises and Events

Whitey's Boat Cruises Inc. *dba* Na Pali Catamarans

**KAANAPALI KAI CHARTERS, INC.
TERALANI SAILING CHARTERS**

Chair, Vice Chair & Senators of the Committee:

Teralani Sailing Charters is a family owned business operating n Kaanapali since 1995. We are one of several charter companies on Maui that moor our vessels offshore, outside one of Maui's small boat harbors.

On August 24, 2018, Hurricane Lane threatened Maui and could have devastated our business. Our plan would have included, heading for m Kahului Harbor for a safer mooring. Kahului would have been our only safety in the event of a direct hit.

However, less than 24 hours before Lane was to hit, the Department of Transportation denied vessels entry into Kahului Harbor, and would have sent or 3 vessels into dangerous offshore storm conditions.

In the past, if a hurricane was heading for Maui's South shores, vessels moored on the South shore would travel around Maui to seek shelter in Kahului Harbor on the North shore. Kahului Harbor is on the leeward side of the island during a storm from the South. This same emergency protocol has been follow for 30 years. However, as stated above, DOT Harbors Maui District Manager ordered that no that "all vessels, regardless of size, that have not already received express permission by USCG and DOT-Harbors to remain in port, are hereby ordered to depart Kahului, Kaunalapau and Kaunakakai Harbors...."

I ask that you please consider the draft language submitted by the Ocean Tourism Coalition to rectify this problem.

Your Truly,

David Weiss
Executive Vice President
Kaanapali Kai Charters, Inc.
Kaanapali Sails, Inc
Privacy Charters, LLC
dweiss@aqualani.com

From: [kevin millett](#)
To: [TRSTestimony](#)
Subject: Testimony regarding Harbors closure
Date: Monday, January 21, 2019 3:07:23 PM

Regarding: Committee on Transportation
Informational Briefing
Rm 225 , 11:00AM
Wednesday Jan, 23, 2019

Aloha Senator Inouye and committee members,

My name is Kevin Millett and I own HoloHolo Charters Inc employing 60 people on the island of Kauai.

My company operates, along with five other companies, off the Port Allen DOT pier. This pier is completely unprotected in a south wind storm or a hurricane. Any vessel remaining in this "harbor" during a hurricane is virtually guaranteed to be completely destroyed.

That said, there is absolutely no where else on island to run to in such a situation except Nawiliwili harbor and tie up to DOT commercial piers. Sailing to Oahu is not an option as it is over 100 miles away and the harbors there have their own set of issues. Regardless of which, it is impractical and reckless to direct employees and vessels off shore into a hurricane while leaving their homes and families untended.

Nawiliwili DOT piers are the safe harbor that we have run to for decades and never had any incidents. They are our only option.

It is understandable that the state would not want a large cruise ship or such in port during such an event because its sinking could long term blockade the critical harbor facilities. However, this does not apply to out tour vessels. They are very small compared to a ship and can easily be towed or dragged out of the way by any number of smaller vessels.

In fact, either of the tug boats currently stationed at Nawiliwili are so powerful that they could easily drag— not just one— but ALL of the commercial tour vessels at once. Even if they were all sunken. So they cannot be seriously considered a blockade risk.

By allowing us the protection of the Nawiliwili Commercial pier and not allowing the tour boat fleet to be destroyed, we will also provide a means to assist the island after the hurricane. My company was directly involved in running supplies and people after the record rain fall on Kauai's north shore in April. The results of that event are proof of the value of having a "ready fleet" of tour boats post calamity.

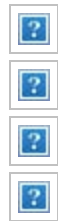
Mahalo for your consideration,
Kevin Millett

Kevin Millett

Owner
[Holo Holo Charters](#)

phone: 808.335.0815

physical: 4353 Waialo Rd. Ste 5A, Ele'ele HI 96705





Activities & Attractions Association of Hawaii
PO Box 598, Makawao, Hawaii 96768
(808)871-7947 Main (808)877-3104 Fax

January 22, 2019

Honorable Lorraine R. Inouye
Chair, Committee on Transportation
Hawaii State Senate
State Capitol
415 South Beretania Street
Honolulu, HI

Aloha Senator Inouye:

Mahalo for scheduling Transportation Committee's Informational Briefing on the proper emergency protocol and procedures for Hawaii's Harbors. My name is Toni Marie Davis, for the last 20 years it has been my honor to serve the Activity & Attraction Industry of Hawaii through my position as the Executive Director of A3H (Activities & Attractions Association of Hawaii). A3H represents nearly 200 businesses statewide, many of which are ocean related commercial activities. Our members range in size from very large (over 300 employees) to very small (1-2 employees).

When our islands experienced the recent impending hurricanes, DOT Harbors sent the below to Maui Boaters seeking refuge in Kahului Harbor:

HARBOR MASTER NOTICE - MAUI DISTRICT
Re: Closure of Kahului, Kaunakakai and Kaunakakai Harbors

Kahului, Kaunakakai and Kaunakakai Harbors are critical lifelines for the State of Hawaii. Every resident and visitor rely on our harbors to deliver essential supplies, with Kahului, Kaunakakai and Kaunakakai Harbors being our only Commercial Ports for each island on Maui, Lanai and Molokai, respectively. In order to protect our most crucial asset, our ports, it is incumbent upon each harbor user to do their part in protecting our infrastructure. Upon the direction of the United States Coast Guard (USCG) and the State of Hawaii, vessels must leave our harbors, so we can properly protect our piers and ensure vessels have a safe port to which they can return and begin to supply our state as quickly as possible following a heavy weather event.

In anticipation of heavy weather associated with the arrival of Hurricane LANE, the USCG, in coordination with DOT-Harbors, has implemented, and anticipates implementing, the following:

- The USCG has implemented "Condition X-Ray" for Maui District ports as of 1100 hours, TUESDAY August 21, 2018. Condition X-Ray is set 48 hours before 34 knot winds are anticipated to impact a commercial port. All ocean going commercial vessels and ocean going barges greater than 200 gross tons must make plans for departing the port area if they do not have specific permission from the USCG Captain of the Port and DOT-Harbors to remain. Vessels will be required to complete cargo operations and begin departing the port within 24 hours after Condition X-RAY is set.

- The USCG anticipates implementing "Condition Yankee" by 1100 hours, WEDNESDAY August 22, 2018, at which time all fueling operations will cease. Condition Yankee is set 24 hours before 34 knot winds are anticipated to impact a commercial port. Cargo operators must, upon implementation of Condition Yankee, complete the securing of cargo operations at their facilities and begin departures to sea to avoid the storm.

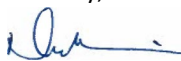
All vessels, regardless of size, that have not already received express permission by USCG and DOT-Harbors to remain in port, are hereby ordered to depart Kahului, Kaunapau and Kaunakakai Harbors on or before the setting of "Condition Zulu". It is the responsibility of all owners and agents to properly book departure times and arrange any required services such as pilots and tugs. Vessel traffic is expected to be heavier than normal due to the anticipated port closure. All vessel movements must be properly scheduled in PORTCALL.

- The USCG anticipates implementing "Condition Zulu" by 2300 hours, WEDNESDAY August 22, 2018. Condition Zulu is set 12 hours before 34 knot winds are anticipated to impact a commercial port. There is only a 12-hour window at most between "Yankee" and "Zulu". All vessels must have departed by the implementation of "Condition Zulu" unless specific permission to remain in port has been granted by USCG and DOT-Harbors. The USCG will close the port to all traffic both inbound and outbound at this point unless a vessel operator has specific authorization from the USCG Captain of the Port.

Failure of any vessel owner or agent to comply with this official order, may subject them to fines and penalties per the authority granted to DOT-Harbors under the Hawaii Revised Statutes and the Hawaii Administrative Rules.

Once our harbors are reopened, vessel owners and agents can begin the process for their return. This process will also require all owners and agents to make proper bookings and arrange for required services ahead of time. Please ensure that PORTCALL is updated with your request for berthing information.

Sincerely,



Duane Kim
Harbors Maui District Manager / Harbormaster

This notice established a new statewide policy at the last minute. The coast guard only requires vessels over 200 tons to leave the harbors. This was strictly a state DOT decision. At the time of this pending storm DLNR was allowing as many small passenger vessels to enter and moor these vessels, which is the normal mode as small passenger vessels pose no threat to harbor facilities.

When an emergency strikes like an impending storm with time to prepare and seek shelter, our harbors should not be divided into Federal, DOT and DLNR, they should be divided into "safe" and "unsafe" harbors and all vessels under 200 tons should be allowed to seek refuge in those harbors which are considered safe.

This will ensure the safety of the greater number of people, while not impeding our commercial harbors. It is simple common sense.

Sincerely,

Toni Marie Davis

Toni Marie Davis

For Consideration

Work Boat Magazine
Dec 2018 Issue

At A Glance

Expert Opinion



By Joel Milton

Joel Milton works on towing vessels. He can be reached at joelmilton@yahoo.com.

On the Water

Hurricane uncertainty – Part II

Last month's column ended with this advice: Be humble, be uncertain, and the life you save may be your own. You should embrace uncertainty as much as you can. It may sound counterintuitive, but it can help your decision-making process much more than misplaced overconfidence ever will.

Hurricanes are very complex systems, existing within and interacting with a much bigger and even more complex system — Earth's atmosphere. The science of forecasting hurricanes has steadily improved, as has weather forecasting in general. But it will always have distinct limitations since there are a lot of moving parts involved. We don't know everything, let alone understand it.

The moving parts that are the most concerning in any given storm are its track, speed-over-ground, wind intensities (maximum sustained winds and gusts, overall and by quadrant), and size and shape of the wind field (further subdivid-

ed by strength: tropical storm or hurricane force). The last concern, should you be forced to ride out a near or direct hit in port, is the storm surge at landfall. The aforementioned moving parts are all asymmetric, constantly changing variables affected by numerous other constantly changing variables within the broader atmospheric system. So, it's diabolically complicated.

Despite these known and unknown complications, the standard navigational doctrine for any vessel at sea is simple: whatever you do, avoid the tropical storm force (and above) wind field and especially the right front quadrant of the dangerous semicircle for a Northern Hemisphere storm. Failure to do this may result in injury to your crew, damage to your vessel, damage to or loss of cargo, or all three. It may also be lethal.

One of the tools used to aid navigation is the National Hurricane Center's Five-Day Graphical Tropical Weather Outlook. It includes the familiar five-day forecast cone for any active cyclones. Known as the cone of uncertainty, cone of probability, error cone, and even the cone of death, this is the funnel-shaped graphic that shows the predicted path of the storm's center ... sort of.

From: [David Jung](#)
To: [TRSTestimony](#)
Subject: Fw: Fw: Hurricane Lane
Date: Monday, January 21, 2019 3:45:40 PM

1/23/19 Hearing committee on transportation

----- Forwarded Message -----

From: "toni@a3h.org" <toni@a3h.org>
To: David Jung <mauicaptaindave@yahoo.com>
Sent: Wednesday, August 22, 2018 6:57 AM
Subject: Re: Fw: Hurricane Lane

Aloha Dave,
I sent an email to Suzanne Case....copied you.
On 2018-08-22 4:59, David Jung wrote:

Toni, Please review these emails. State DOT is way off base on this call . This is a new statewide policy at the last minute. The coast guard ONLY requires vessels over 200 tons to leave the harbors. This is strictly a state DOT decision. Small passenger vessels pose no threat to harbor facilities. Immediate political action is needed. This new policy must not be allowed to stand. Please do what you can with our Maui legislators. There is really no where to run to the way Lane is traveling up the island chain. Dave

----- Forwarded Message -----

From: "Kim, Duane SS"
To: David Jung
Cc: Mike Ochsner ; "Lopes, Miles J" ; "Yokouchi, Gerald S"
Sent: Tuesday, August 21, 2018 5:36 PM
Subject: Re: Hurricane Lane

Aloha David,

Your email is duly noted.

Thank you,
Duane

Sent from my iPhone

On Aug 21, 2018, at 17:25, David Jung <mauicaptaindave@yahoo.com> wrote:

Mr. Kim, I can appreciate the need to protect harbor facilities from damage by large commercial vessels. Small commercial vessels which serve the state are a different story. In times of emergency (9/11 for example) Maui Princess and Molokai Princess were the only means of travel between Oahu and Maui. Allowing small passenger vessels a harbor of safe refuge in an island state is crucial. Tourism is an essential part of our states economy and small passenger vessels play a big part. Likely not time now, but a plan needs to be put in place to deal with our state's near coastal commercial vessels during hurricane weather. In the past, DOT Harbors worked with DL&NR and allowed Kahului and other state commercial ports to be used as a harbor of last resort during storm weather. It appears this policy has now been reversed statewide. Prudent harbor management could

allow emergency anchoring or berthing for small commercial vessels in non essential harbor areas with little or no risk to harbor facilities. While the loss of recreational boats might be regrettable, putting the state's commercial passenger fleet at risk has a much greater consequence. Hopefully all of the small passenger fleet will survive this storm without loss of vessels and crew .

Perhaps the DOT will accept the need for a policy review and make policy adjustments in the very near future.

Respectfully, David H. Jung

From: "Kim, Duane SS" <duane.ss.kim@hawaii.gov>
To: David Jung <maucaptaindave@yahoo.com>
Cc: Mike Ochsner <mstmaui@uscg.mil>; "Lopes, Miles J" <miles.j.lopes@hawaii.gov>; "USCG Marine Safety Team Maui - USCG (mstmaui@uscg.mil)" <mstmaui@uscg.mil>; "Yokouchi, Gerald S" <gerald.s.yokouchi@hawaii.gov>
Sent: Tuesday, August 21, 2018 3:55 PM
Subject: RE: Hurricane Lane

Aloha David,

Kahului, Kaunapau and Kaunakakai Harbors are critical lifelines for the State of Hawaii. Every resident and visitor rely on our harbors to deliver essential supplies, with Kahului, Kaunapau and Kaunakakai Harbors being our only Commercial Ports for each island on Maui, Lanai and Molokai, respectively. In order to protect our most crucial asset, our ports, it is incumbent upon us to ensure we can properly protect our piers, wharves and surrounding areas so we can ensure commercial vessels have a safe port to which they can return and begin to supply our state as quickly as possible following a heavy weather event.

Due to the anticipated tropical force winds at Kahului Harbor and the USCG's anticipated port closure of Maui District ports as of 2300 Wednesday 8/22/18, your request to bring your 4 boats into Kahului Harbor is not approved.

Regards,
Duane

Duane S. S. Kim
Harbors District Manager
DOT Harbors Division, Maui District
103 Ala Luina Street
Kahului, HI 96732
Tel: 808-873-3350
Cell: 808-268-3173

From: David Jung <maucaptaindave@yahoo.com>
Sent: Tuesday, August 21, 2018 9:54 AM

To: Kim, Duane SS <duane.ss.kim@hawaii.gov>
Cc: Mike Ochsner <mstmaui@uscg.mil>; Liezl A. LT Nicholas
<liezl.a.nicholas@uscg.mil>; Lopes, Miles J <miles.j.lopes@hawaii.gov>
Subject: Hurricane Lane

Mr Kim, Based on NWS and CPHC forecasts, It highly likely that the Lahaina Roadstead and Lahaina Harbor will be untenable during the passage of Lane. I am requesting berthing of our two aluminum 100' crewboat conversions Maui Princess and Molokai Princess alongside a suitable pier starting on Wednesday afternoon (8/23/18) We also request the 65' Lahaina Princess and the 65' Kaulana be allowed to raft up outboard of each 100' vessel. We have very adequate mooring lines and yokohama type fenders. All vessels are USCG inspected , insured, and are DL&NR permitted vessels with USCG licensed operators. While the USCG has issued directives on vessels over 200 ton, the less than 100 ton small craft are not affected by the USCG port closure directive. Keeping Kahului Harbor available for small craft as a harbor of safe refuge has been during hurricane conditions has been a long standing tradition for Maui small craft. The T Boat industry is a valuable part of Maui County's visitor industry. Yours truly, David Jung



Lane Intensifies to Dangerous Category 5 Hurricane, 160 mph Winds

August 21, 2018, 12:01 AM HST · Updated August 21, 11:32 PM

Wendy Osher ·

76 Comments

15K people recommend this. [Sign Up](#) to see what your friends recommend.

8/21/18

Text Size: A A A

MAUI

By Wendy Osher

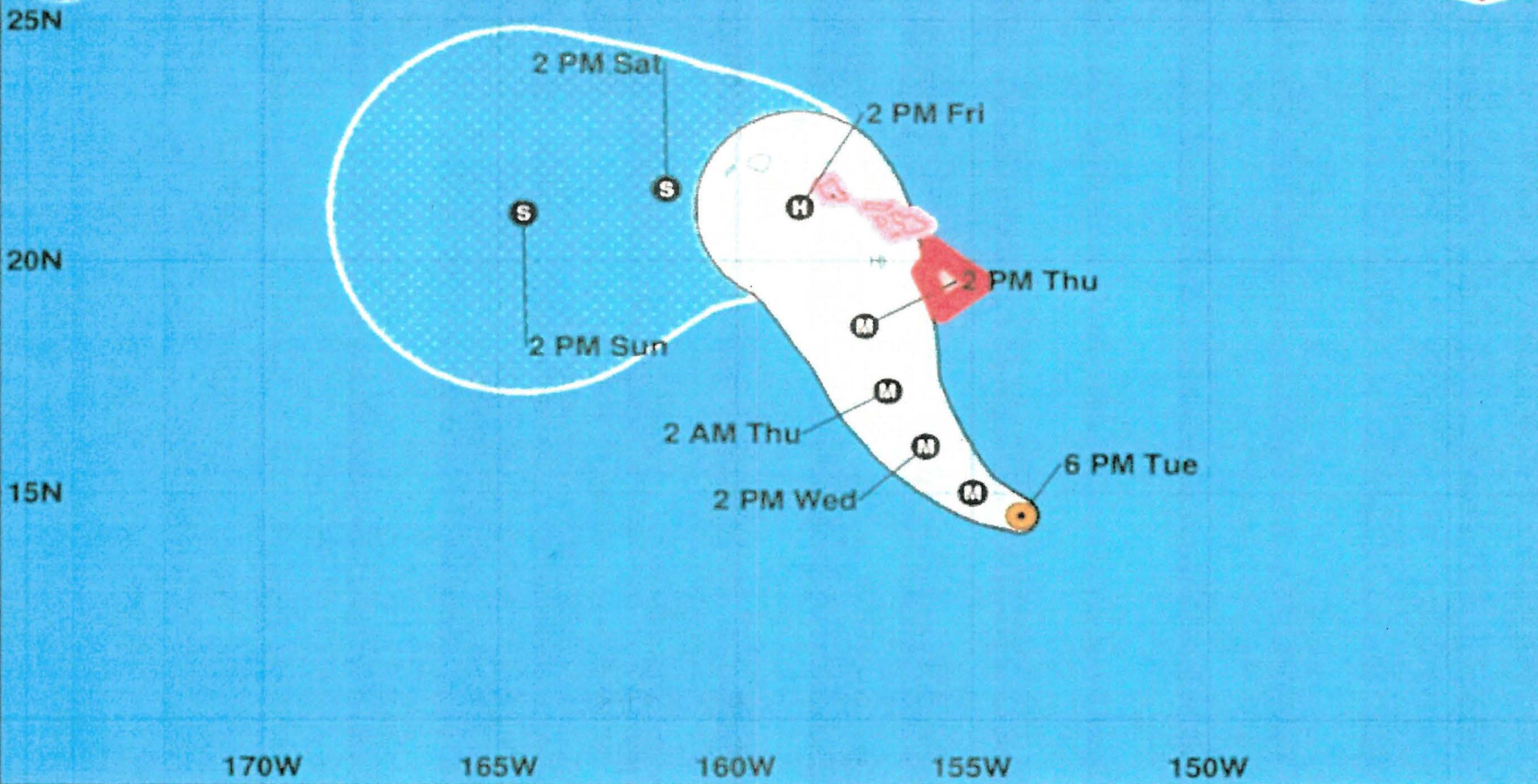
MAUI

(f) X
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Note: The cone contains the probable path of the storm center but does not show the size of the storm. Hazardous conditions can occur outside of the cone.



Hurricane Lane
 Tuesday August 21, 2018
 6 PM HST Advisory 30
 NWS Central Pacific Hurricane Center

Current information: ●
 Center location 14.5 N 154.0 W
 Maximum sustained wind 160 mph
 Movement WNW at 9 mph

Forecast positions:
 ● Tropical Cyclone ○ Post/Potential TC
 Sustained winds: D < 39 mph
 S 39-73 mph H 74-110 mph M > 110 mph

Potential track area:
 ▽ Day 1-3 ▨ Day 4-5

Watches:
 ■ Hurricane ■ Trop Storm

Warnings:
 ■ Hurricane ■ Trop Storm



National Hurricane Center updates National Storm Surge Hazard Maps

Hawaii, U.S. Virgin Islands and Hispaniola added

NOAA's National Hurricane Center (NHC) has updated its National Storm Surge Hazard Maps. The improvements include:

- The addition of the Hawaiian Islands, the U.S. Virgin Islands and Hispaniola
- Updated topography data (Digital Elevation Model)

This new addition will continue to be hosted by NOAA's GeoPlatform and be accessible via NHC's webpage at www.hurricanes.gov/nationalsurge. The first version was issued in 2014 and covered the U.S coastline from Texas to Maine. Puerto Rico was added in a second version in 2017.

These storm surge hazard maps enable people living in hurricane-prone coastal areas to evaluate their risk of coastal flooding due to storm surge. These maps make it clear that storm surge is not just a beachfront problem, with the risk of storm surge extending many miles inland from the immediate coastline in some areas.

"This is an important tool to help individuals determine their vulnerability to the most deadly part of a hurricane. Understanding this risk gives you the time to take action when emergency managers tell you to evacuate", said Ken Graham, Director of NOAA's National Hurricane Center.

NHC uses the Sea, Lake, and Overland Surges from Hurricanes (SLOSH) hydrodynamic model to simulate storm surge along hurricane-prone portions of the U.S. coastline and has begun an effort to do the same along some international coastlines within the Caribbean region. Based on climatology, hundreds of thousands of hypothetical hurricanes are simulated and the potential storm surges are calculated. Composites of the resulting storm surges are created and high-resolution inundation maps are created using local topography.

In locations that have a steep and narrow continental shelf, such as islands, waves can be a substantial contributor to the total water level rise observed during a tropical cyclone. For these areas, SLOSH has been coupled with a wave model to enable a more complete and accurate analysis of flood risk. Additionally, through a partnership with USAID and the World Meteorological Organization, these modeling advances were developed and tested within Haiti and the Dominican Republic via the Coastal Inundation Forecasting Demonstration Project for the Caribbean Sea (CIFDP-C).

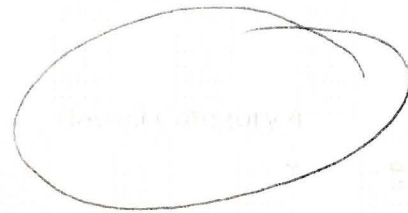
"Through this multi-year partnership with USAID and the World Meteorological Organization, we're able to bring the same life-saving technology used in the United States to Haiti and the Dominican Republic," said Jamie Rhome, NHC Storm Surge Specialist.

Hawaii Category 1

Hawaii Category 2

Hawaii Category 3

Hawaii Category 4



Click Island name to Zoom/Pan map view to that island:

- Kauai
- Oahu
- Molokai/Lanai
- Maui
- Hawaii



This national depiction of storm surge flooding vulnerability helps people living in hurricane-prone coastal areas along the U.S. East and Gulf Coasts, Puerto Rico/USVI, Hawaii, and Hispaniola to evaluate their risk to the storm surge hazard. These maps make it clear that storm surge is not just a beachfront problem, with the risk of storm surge extending many miles inland from the immediate coastline in some areas. If you discover via these maps that you live in an area vulnerable to storm surge, find out today if you live in a hurricane storm surge evacuation zone as prescribed by your local emergency management agency. If you do live in such an evacuation zone, decide today where you will go and how you will get there, if and when you're instructed by your emergency manager to evacuate. If you don't live in one of those evacuation zones, then perhaps you can identify someone you care about who does live in an evacuation zone, and you could plan in

Yellow > 3'
 Orange > 6'
 Red > 9'

LEGEND



§266-2 Powers and duties of department. (a) The department of transportation shall:

(1) Have and exercise all the powers and shall perform all the duties which may lawfully be exercised by or under the State relative to the control and management of commercial harbors, commercial harbor and waterfront improvements, ports, docks, wharves, piers, quays, bulkheads, and landings belonging to or controlled by the State, and the shipping using the same;

(2) Have the authority to use and permit and regulate the use of the commercial docks, wharves, piers, quays, bulkheads, and landings belonging to or controlled by the State for receiving or discharging passengers and for loading and landing merchandise, with a right to collect wharfage and demurrage thereon or therefor;

(3) Subject to all applicable provisions of law, have the power to fix and regulate from time to time rates and charges for:

- (A) Services rendered in mooring commercial vessels;
- (B) The use of commercial moorings belonging to or controlled by the State;
- (C) Wharfage or demurrage;
- (D) Warehouse space, office space, and storage space for freight, goods, wares and merchandise; and
- (E) The use of derricks or other equipment belonging to the State or under the control of the department;

(4) Make other charges including toll or tonnage charges on freight passing over or across docks, wharves, piers, quays, bulkheads, or landings;

(5) Appoint and remove clerks, harbor agents and their assistants, and all such other employees as may be necessary, and to fix their compensation;

(6) Adopt rules pursuant to chapter 91 and not inconsistent with law; and

(7) Generally have all powers necessary to fully carry out this chapter.

(b) Notwithstanding any law or provision to the contrary, the department of transportation is authorized to plan, construct, operate, and maintain any commercial harbor facility in the State, including, but not limited to, the acquisition and use of lands necessary to stockpile dredged spoils, without the approval of county agencies.

All moneys appropriated for commercial harbor improvements, including new construction, reconstruction, repairs, salaries, and operating expenses, shall be expended under the supervision and control of the department, subject to this chapter and chapter 103D.

All contracts and agreements authorized by law to be entered into by the department shall be executed on its behalf by the director of transportation.

(c) The department shall prepare and submit annually to the