

**Hawaiian Islands Humpback Whale National Marine Sanctuary
Agency Report to the Sanctuary Advisory Council
November 8 - April 12, 2024**

Hawaiian Islands Humpback Whale National Marine Sanctuary garners additional funding to replace whale response equipment lost and support broader monitoring responsibilities of humpback whales due to Lahaina, Maui wildfires

Generous donations from the Center for Coastal Studies and the Carolyn Weston Foundation have enabled HIHW to replace entanglement response equipment lost in



the Lahaina wildfires and purchase new gear to support humpback whale monitoring. An additional donation from Michael and Deborah Rybak helped build our capacity to use drones to safely assess entangled or otherwise compromised whales and broaden our Health and Risk Assessment program.

The sanctuary's large whale entanglement response team members based on Maui (and that could attend the meeting in person) pose at the sanctuary's Kihei site with level 4 responder Lee James, the lead for the West Maui Response team, holding a check for \$10,000 from the Carolyn Weston Foundation. From left to right: Ed Lyman, Mark Deakos, Ted Grupenhoff, Lee James, Dr. Marc Lammers, Nicole Davis, Grant Thompson, Ltjg Shelly Rofrits, and Maria Harvey.

Hawaiian Islands Humpback Whale National Marine Sanctuary Participates in Girl Scout STEM Fest at University of Hawaii Maui College

On Friday, November 10th, sanctuary staff member Michelle Graham and sanctuary volunteer Jeep Dunning attended the Girl Scout STEM Fest at the University of Hawaii Maui College. The event brought together 8 different groups from the Maui community, including engineering firms, government organizations, and healthcare professionals. Girl Scouts from Kindergarten through 8th grade were in attendance, split into groups based on their age. Graham and Dunning taught lessons on humpback whales, turtles, and the National Marine Sanctuary system.

HIHW hosts initial IRA planning charrette for redesign of Kīhei campus

In 2022, HIHWNMS received \$17 million in IRA funding to build climate resilience into our Kīhei community, visitor, and office facilities. This week, HIHW staff facilitated more than 25 ONMS & FEO staff and contractors through a three-day charrette to develop design concepts and strategies to reduce impacts from upland flooding and sand inundation while building coastal and climate resilience and ensuring our ability to safely carry out our mission. Our goal is to maximize the efficiency of our existing space, limit the new building footprint, design flexibility into new and refreshed spaces, reduce our carbon footprint, utilize sustainable design and products, and support the local Maui community. The architectural and engineering design contractors will present us with three options in January based on these goals and our discussions. Everyone walked away from our time together with a greater appreciation for the challenges we face and the opportunities we have to develop an innovative design that portrays the urgency of our work, captures the spirit of our mission, and reflects the wisdom of our local culture.



Photos: Multiple design options will be distilled into three (top left), HIHW Kīhei facility viewed from afar (top right), ONMS & FEO staff and contractors discussing design options for HIHW facility (bottom). Credit: Kim Hum

HIHWNMS shares our work with Hawai'i Pacific University graduate students

On November 7, HIHWNMS staff member Cindy Among-Serrao was the guest speaker for Hawai'i Pacific University's graduate seminar focused on community-based marine

research. Cindy presented on Ocean Count, our signature outreach and citizen science project that has offered visitors and local community members an opportunity to monitor humpback whales from the shores of O‘ahu, Kaua‘i, and Hawai‘i Islands for more than two decades. Cindy also presented on HappyWhale, which is another citizen science opportunity for people around the world to contribute to their global effort to identify humpback whales through fluke ID. The presentation was a great opportunity to spread awareness about our sanctuary and some of the ways the public can get involved.

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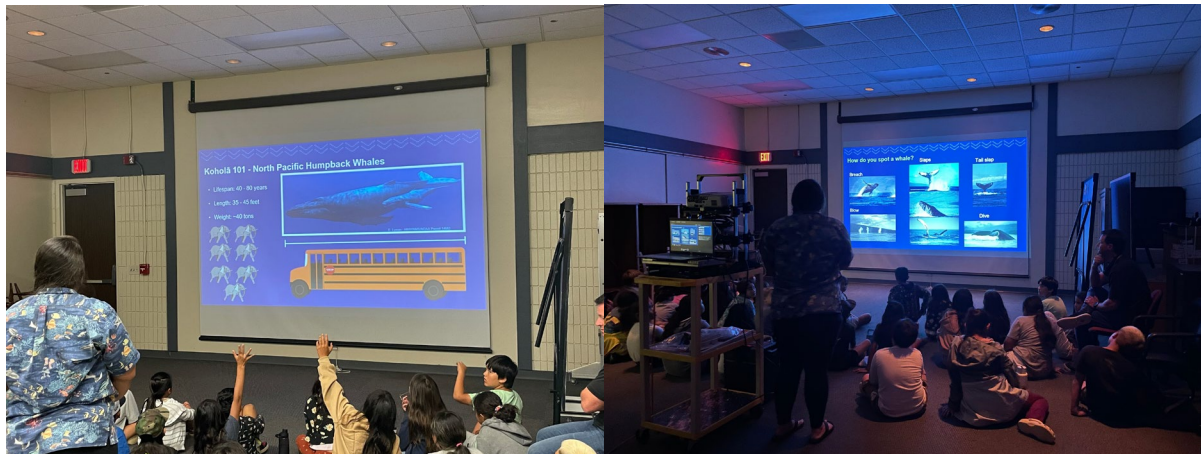
Sanctuary volunteer Jeep Dunning teaches a group of Girl Scouts about the anatomy of a humpback whale. Photo: Michelle Graham

HIHW builds on successful partnership with Hawai‘i State Library System

- As part of our ongoing partnership with Hawai'i libraries, HIHWNMS “adopted” a bulletin board at the North Kohala Public Library highlighting koholā migration from Alaska to Hawai'i and illustrating surface behaviors that are commonly seen from Kohala, on the northwest coast of Hawai'i Island.
- On November 1st and 9th, HIHWNMS staff member Cindy Among-Serrao gave koholā 101 presentations to several elementary grade classes at the Thelma Parker Memorial Public and School Library located in Waimea on Hawai'i Island. Among-Serrao presented on humpback whale biology and behaviors, and incorporated interactive components to keep the keiki engaged.



Photo: View of the completed HIHWNMS bulletin board at North Kohala Public Library. (Credit: Cindy Among-Serrao/NOAA)



Koholā 101 presentation to Waimea Elementary second and third grade students. (Credit: Kael Kattil)

Kaua'i Ocean Discovery Volunteers Honored at RSVP Recognition Event

Kaua'i Ocean Discovery volunteers and Program Specialist Jean Souza, who serves as KOD's onsite manager, participated in the annual celebration of volunteers on Dec. 7, sponsored by the Retired and Senior Volunteer Program (RSVP), a federal volunteer

program implemented by the County of Kaua'i Office of Aging. KOD is one of 35+ government and non-profit RSVP stations on Kaua'i that hosted 225 active RSVP volunteers who collectively served 22,572 hours in 2023.

Kaua'i Ocean Discovery was one of only three volunteer stations invited to have an informational display at the celebration which provided great opportunities for exposure and volunteer recruitment.



Kaua'i Ocean Discovery volunteers were among dozens recognized by RSVP for their outstanding contributions in 2023 at 35+ RSVP volunteer stations on the island. (NOAA photo)

HIHW Bids Aloha to our Friends at the US Coast Guard

On 08AUG23, wildfires indiscriminately decimated the urban landscape of Lahaina, an iconic town rooted in Hawaiian heritage and antiquity located on the leeward side of Maui, forcing mass evacuations, catastrophic damage, and human death. The Federal Emergency Management Agency (FEMA) assigned an Emergency Support Function (ESF-10) to the US Coast Guard (USCG) on 25AUG23; establishing a Type-1 incident to execute disaster and response operations with the USCG as the lead federal agency. To deliver comprehensive disaster recovery capabilities, a partnership was solidified between the National Oceanic Atmospheric Administration (NOAA) and the USCG-ultimately enabling the timely and appropriate allocation of all resources, personnel,

equipment, supplies assigned to support response efforts, and communications between various response teams, agencies, and regional stakeholders.

After three months at our Kihei site, the USCG Incident Command Post (ICP) for the Western Maui Wildfires completed their mission of removing 87 vessels from Lahaina Harbor. We have been honored to host 80+ Sentinels from across the country who aided support recovery efforts. On December 14, the USCG and NOAA exchanged accolades and gifts as they prepare to move out of our facility. They have been excellent partners and guests, and we look forward to shifting our focus back to our long-standing partnership on humpback whale research and response.



The Commander of CG SECTOR Honolulu, Captain Aja Kirskey, and the Incident Commander overseeing the Western Maui Wildfire response efforts, Captain Melanie Burnham, graciously presented HIHW Superintendent Kim Hum with a plaque from the National Strike Force and SECTOR Honolulu with thanks for support of their mission to remove vessels from Lahaina Harbor. HIHW staff presented USCG staff with HIHW shirts -- with the requirement that they come back to volunteer at the sanctuary whenever they are on Maui.

Entanglement Responders jump aboard the M/V Safari Explorer for continuing outreach with a long standing partner

In 2013, Maria Harvey, who is now the Sanctuary's Resource Protection and Monitoring assistant, stood by on a small skiff off of Manele Bay, Lanai for Ed Lyman and the disentanglement team to arrive for an entangled humpback whale calf that she was monitoring. Maria at the time was working aboard the M/V Safari Explorer, a liveaboard eco-tourism vessel that spends its winters in Hawaii and summers in Southeast Alaska. The calf was successfully disentangled by Ed and the team and this experience set off a chain of events leading Maria to turn her career towards disentanglement. Maria left the Safari Explorer and went to work with the Center for Coastal Studies, garnering disentanglement experience with numerous species of marine animals in Provincetown, MA. Now 10 years later, Maria returned to Hawaii to help Ed and the sanctuary with

their on-going disentanglement efforts and returned to the Safari Explorer to speak with guests about disentanglement and her journey from the very vessel they are aboard.

The Safari Explorer, owned by UnCruise, operates in Hawaiian waters from December - May. Ed, the sanctuary's Natural Resource Specialist & Acting Regional Large Whale Entanglement Response Coordinator under NOAA's MMHSRP, and Maria board the Safari Explorer weekly to expand our outreach, educate the guests, and increase eyes on the water for the entirety of the whale season. Entanglement spotting guides, how to report, and hotline numbers are left with the guests and crew for times in which they may come across another entangled animal and can standby - similar to Maria, the guests, and crew in 2013.



Left: Maria Harvey speaking with guests aboard the M/V Safari Explorer (Photo credit: Wilson Barrett). Right: Sanctuary staff member, Maria Harvey, explaining disentanglement tools and their specific uses with Safari Explorer guests. (Photo credit: Wilson Barrett)

Hawaiian Islands Humpback Whale National Marine Sanctuary wraps up their large whale entanglement response and ocean-user first responder trainings in preparation for whale season

NOAA Hawaiian Islands Humpback Whale National Marine Sanctuary wrapped up their large whale entanglement response and first responder training in anticipation of the upcoming whale season in Hawaii. The sanctuary coordinates large whale entanglement response working closely with and under the authority of NOAA Fisheries Marine Mammal Health and Stranding Response Program (MMHSRP, permit # 24359). Over recent weeks, the sanctuary conducted training on Kauai, Maui, and Hawaii

Island. Training included classroom, shoreside, and on-water components. Training involved multiple agencies and groups, including: NOAA Fisheries, State of Hawaii Division of Aquatic Resources, the U.S. Coast Guard, tour companies, fishers, researchers, and others. Overall, staff trained more than 250 individuals in support of the sanctuary-led monitoring and/or entanglement response effort.

Hawaiian Islands Humpback Whale National Marine Sanctuary leads a multi-agency effort to free a young humpback whale from life-threatening entanglement

On December 30, 2023, Hawaiian Islands Humpback Whale National Marine Sanctuary (HIHWNMS) received a report of an entangled subadult humpback whale off the leeward coast of Hawai'i Island. Over eight days, HIHW staff coordinated and led more than 15 agencies and organizations involving more than 30 personnel to mount four authorized response efforts over four different islands. This particular effort posed many complex challenges due to the whale's unpredictable behavior and high mobility (> 500 nms), poor weather conditions, and a very complex entanglement, involving multiple wraps over multiple body parts, embedded gear, and gear forward on the animal. The case stands as one of the most complex and logistically challenging over the more than 20 years HIHWNMS has been coordinating large whale entanglement response efforts with its many partners in Hawai'i.

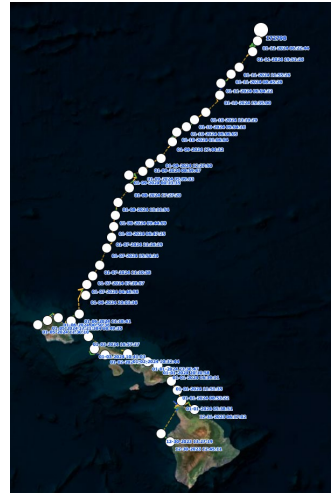


On December 30th, Maria Harvey, HIHW's Large Whale Resource Protection and Monitoring Assistant, flew to Kona and worked with a HIHW-trained response team to assess and document the animal and entanglement by drone and attached a transmitter package that allowed HIHW to track the animal and coordinate response efforts over the ensuing week.

Over the next five days the animal moved from Hawai'i Island to Maui, Molokai, and Oahu. HIHW staff mounted response efforts aboard the sanctuary vessel Koholā on Maui and Molokai, and led a coordinated multi-agency, multi-day effort involving the U.S. Coast Guard Sector Honolulu and Station Honolulu, Papahānaumokuākea Marine National Monument (PMNM), NOAA Fisheries Pacific Islands Science Center and Protected Resources Division, and the State of Hawai'i, utilizing multiple vessels and a USCG C130. Unfortunately, rough seas and unusually high swells, along with a highly mobile and unpredictable animal, made the efforts extremely difficult, and the young

animal was not relocated. The entangled whale has since moved offshore on its return to high latitude feeding grounds.

Above: Entangled 2-year old humpback whale documented by drone. Photo credit: Kayleigh Grant/ NOAA MMHSRP (permit no. 24359). Below Left: HIHW's Maria Harvey and the trained Kona response team onboard after successfully tagging the whale. Photo credit: Cammy Dabney / NOAA MMHSRP (permit no. 24359). Below Right: Track of entangled whale as of 1/12/2024



Hawaiian Islands Humpback Whale National Marine Sanctuary responds to third entangled humpback whale of 2024 breeding/calving season

On January 6, 2023, Hawaiian Islands Humpback Whale National Marine Sanctuary (HIHWNMS) received a report of an entangled subadult humpback whale off the leeward coast of Maui. With many members of the Sanctuary staff on Oahu responding to another entangled whale, Lee James, Jason Moore, and the West Maui Rapid Response Team (WMRRT) got underway from Mala ramp to locate and document the animal. Despite having no standby vessel, the team relocated the animal quickly and, through heightened consultation with Ed Lyman, Natural Resource Specialist & Acting Regional Large Whale Entanglement Response Coordinator under NOAA's MMHSRP, the team decided to document the animal with the use of UAS and attempt to attach a telemetry tag. Due to the animal's unpredictable nature, short surface times, and long dive times, the tagging effort was unsuccessful. Through the UAS documentation, the team learned that the animal had line going through the mouth, exiting both sides and coming to a twist near the flukes, essentially making a bridle. Due to poor weather conditions in subsequent days, the animal was not reported again until January 10. With weather permitting and time allowing, HIHW's response team was able to relocate the animal between Wailea and Molokini, but the animal's long dive times, short surface

intervals, and unpredictable behavior made any attempt at intervention impossible. Sanctuary partners and network members from the U.S. Coast Guard Station Maui and the Pacific Whale Foundation's (PWF) research team assisted in the search for the animal. PWF aided the team via UAS during the response effort and obtained aerial photogrammetry to better understand its current body condition. HIHW has conducted six response efforts in just 14 days. So far it is turning out to be an extremely busy season.



Entangled humpback whale documented by use of a drone. Photo credit: Jason Moore/ NOAA MMHSRP (permit no. 24359)

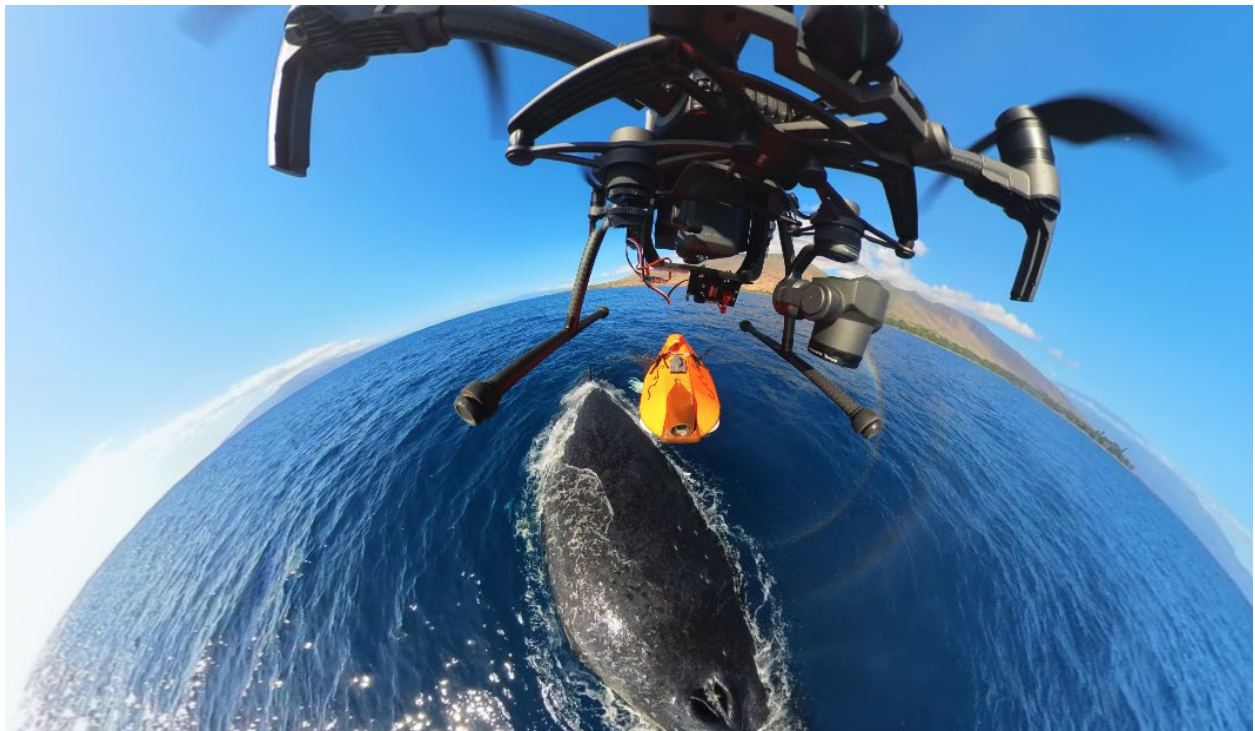
HIHWNMS Research Team Publishes Note on Impulsive Sounds Produced by Humpback Whale Surface Active Behavior

On January 11th, the HIHWNMS research team-led note "Impulsive sounds produced by humpback whale surface active behavior recorded on acoustic tags and bottom-moored recorders" was published in the latest issue of Marine Mammal Science. The paper utilizes data from ONMS's acoustic monitoring project, [SanctSound](#), and HIHW's collaborative tagging efforts with University of Hawai'i Hilo and The Dolphin Institute. The paper describes impulsive sounds associated with surface-active behaviors in humpback whales and how these signals can contribute to the overall soundscape where humpbacks are present. You can access a full text version of the article via this link,

<https://onlinelibrary.wiley.com/share/author/FRF3KPNGDW3B92YUWAZD?target=10.1111/mms.13085>.

HIHWNMS' Health and Risk Assessment Monitoring team begins 2024 season with new collaborations, tools, and techniques

Hawaiian Islands Humpback Whale National Marine Sanctuary's (HIHWNMS) Health and Risk Assessment Monitoring program began their 22nd season conducting six monitoring cruises to assess the health of and risks to humpback whales within sanctuary and surrounding waters. The initial cruises were conducted in collaboration with Whaleman Foundation, which has been supporting the sanctuary's monitoring program since 2008. This season also was the start of a new multi-year collaboration involving Jessie Hoffman, a PhD student and her advisor, Dr. Shannon Atkinson of the University of Alaska - Fairbanks. Ms. Hoffman will be working with HIHW's monitoring, response and research programs to better quantify the impacts of risk factors (e.g., entanglement and ship strikes) using stress hormones collected from breath and skin samples, photogrammetry for condition analysis, and movement patterns to quantify energetic costs. Stress hormones will be collected by biopsy sampling, breath samples will be collected through the use of poles and drones, photogrammetry will be obtained by the use of specially equipped and calibrated drones, and energetic costs will be measured through the use of pole- and drone-deployed multi-sensor suction-cup tags. Her work will be coordinated with HIHW's existing monitoring and research programs.





Drone carrying and dropping a suction-cup tag flies over sanctuary waters off Maui as an adult humpback whale breaches in the background (NOAA MMHSRP permit no. 24359)

Storms bring mud and rain – and a new partnership

Back to back winter storms have brought mud and flooding to Kīhei for the second time in as many weeks, forcing the closure of multiple roads and our facilities – along with days worth of clean up. Thanks to changes made to the property over the past several years, no buildings were flooded. And, in a twist of fate, Maui County Public Works Division needed sand to repair local roads - something HIHW has plenty of. So, the sand building up on our property has been put to good use and we are starting with a clean slate - and parking lot - in the new year!



(left) Beautiful reflection of HIHW facilities in flooded parking lot at daybreak belies the work ahead removing mud and water from our property. (right) Severe winter storms brought flooding and mud – and a few wayward dumpsters – that closed roads for



multiple days in Kihei, Maui.

(left) Managing sand migration sometimes feels like a full time job at HIHW headquarters in Kihei, Maui. Near constant high winds keep us cool but sandy most of the year. (right) Maui County removed 3 cubic yards of sand (which doesn't sound like a lot but was 5 truckloads!) from HIHW property to fix road damage caused by January's floods.

Hawaiian Islands Humpback Whale National Marine Sanctuary's research and monitoring featured in student film

Hawaiian Islands Humpback Whale National Marine Sanctuary (HIHW) worked with Tatiana McCabe, a Masters student in Wildlife Filmmaking at the University of Western England in Bristol, UK, to create a short video illustrating the importance of the monitoring and response HIHW does with its partners and the community. The film will touch upon some of the sanctuary's past monitoring and response efforts over the last 20 years, but focus on current efforts through a personal, firsthand account of a day of research and monitoring out at sea. The film will tie the theme of sanctuary collaboration with the strong sense of community in Hawai'i.



Photo: Tatiana McCabe filming during a rescue and monitoring effort on January 2, 2024 (Credit: G. Thompson)

HIHWNMS Welcomes New SAC Members

HIHWNMS held our largest recruitment effort yet and seated 26 SAC members in December 2023. The expertise of new SAC members ranges from Chief Scientist at National Geographic to First Class Hawai'i Harbor Pilot and includes several members of Native Hawaiian descent. HIHW is also very excited to welcome two new marine science professionals in their 20's and two new high school students who will provide insight and inspiration to the SAC from the next generation of conservationists. HIHW held new member orientations on January 8th and 17th, and it is clear that the new SAC is committed to working hard to protect koholā and their habitat in Hawai'i nei.

An Unwelcome Visitor Runs Aground in HIHWNMS

On December 13, the double masted commercial sailing vessel Ka Imi Kai ran aground within HIHWNMS, just offshore of our Kīhei offices and visitor center. State boating officials seized the vessel and worked with a local contractor to remove it from the

beach with access through our facilities. This is the second time in two weeks this boat has broken off its mooring and run aground in Kīhei.





Photo 1: On December 13, the ka imi Kai ran aground on the reef outside outside Koieie Fishpond and HIHW Kihei HQ; Photo 2: Kids playing on Ka Imi Kai after it came ashore; Photo 3 & 4: On January 15, the boat was broken apart and placed into trash bins on HIHW property before being hauled to the landfill.

Humpback Whales are “sailing” into the Islands

Humpback whales commonly “fluke,” or bring their tails out of the water, typically on deeper or sounding dives. However, the behavior of holding their flukes out of the water for extended periods of time, referred to as “sailing,” is far less common. The behavior has been observed and documented in sanctuary waters since 2016 and has involved at least four different adult mothers with their calves. Hawaiian Islands Humpback Whale National Marine Sanctuary logged the first reported observation of a humpback whale sailing this season as an animal that was observed sailing in 2016 and 2019. Though it is unknown why whales sail, it is thought it may represent a posture that allows the female to remain stationary and resting neutrally buoyant in the water column while allowing the calf to nurse at or near the surface, provide a visual flag towards reducing collision threat, and/or assist with thermoregulation to cool a mother’s large body.

Article: <https://mauinow.com/2024/01/26/tail-up-kayaker-films-rare-behavior-displayed-by-whale-during-lahaina-unity-walk/>



Image obtained from sanctuary drone operations in 2016 of the recently re-sighted female exhibiting the same behavior seven years later. Photo credit: HIHWNMS/ NOAA MMHSRP permit no. 18786.

Volunteers count 2,124 humpback Whales in First Ocean and Whale Count Events of the 2024 Season

January 27 was the first of three koholā counts in 2024. 402 volunteers counted 2,124 whales from 44 sites across six of the eight Main Hawaiian Islands during the Hawaiian Islands Humpback Whale National Marine Sanctuary Ocean Count and The Pacific Whale Foundation’s Great Whale Count.

Island	# of Whales Counted
Kaua’i	292
O’ahu	604
Moloka’i	30
Hawai’i Island	324
Maui	821
Lāna’i	53

This number may represent duplicate sightings of the same whale by different observers or at different time periods or different locations throughout the day. Data collected during the Sanctuary Ocean Count and Great Whale Count combined with other research efforts can help reveal trends in humpback whale occurrence within and amongst whale seasons. A variety of other species were also spotted during the count including honu (green sea turtles), ‘ilioholoikauaua (Hawaiian monk seals), nai’a (spinner dolphins), mālolo (Hawaiian flying fish) and multiple bird species such as ae’o

(Hawaiian stilts), 'iwa (great frigatebird), mōlī (Laysan albatross), kōlea (Pacific golden plover), nēnē (Hawaiian goose), and more. The remaining counts of the 2024 season will be held on February 24th and March 30th. Ocean Count is supported by the National Marine Sanctuary Foundation.



Left: Ocean Count volunteers scouting for whales during January Ocean Count at Kaiaka Rock on Moloka'i. Right: Ocean Count volunteer observing a koholā near the horizon at Hawaiian Paradise Park on Hawai'i Island.

Teacher Workshop held aboard the Majestic Cruise Vessel

On Saturday, January 27th, Sara Wood from HIHWNMS and Paul Wong from PIR embarked on the Majestic cruise ship to teach more than 100 O'ahu educators about humpback whales. These dedicated teachers received comprehensive lesson plan packets designed for classroom use, aimed at educating students about whales and emphasizing the significance of their protection within HIHWNMS. The instruction covered diverse topics, including whale anatomy, migration patterns, the importance of their presence in Hawai'i, and the protocols followed by trained responders during large whale entanglements. Participants had the opportunity to physically engage with baleen, handle a buoy that had been dragged across the Pacific by an entangled whale, and observe a live entanglement demonstration featuring enthusiastic volunteers who

willingly "got entangled." Following this instructive session, the cruise set sail for a 2-hour whale-watching excursion, during which several whales were sighted. Staff members assisted in identifying various whale behaviors and responded to questions, contributing to an enriching and immersive educational experience for all involved.

After getting a lesson on whale anatomy, behavior, and entanglement response, teachers aboard the Majestic search for whales outside of Kewalo Basin in Honolulu, HI. Photo credit: Sara Wood.



Kaua'i Ocean Discovery Participates in a "STEAM" Event in Remote Kekaha

On Feb. 1, Kaua'i Ocean Discovery (KOD) participated in a science, technology, engineering, art and math (STEAM) evening event for students and

families at a school in remote Kekaha, Kaua'i. Program Specialist Jean Souza brought hands-on learning materials from KOD which focused on observation and natural history of marine mammals, including humpback whales, and nearshore marine life. Over sixty students and family members were engaged in KOD's learning station during the two-hour event.

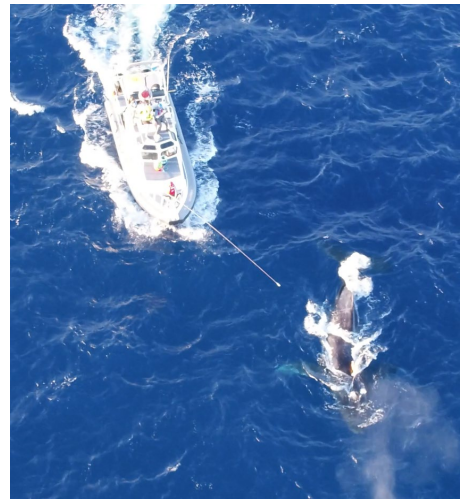


St. Theresa School students in Kekaha visit the KOD learning station during a special

"STEAM" evening event. NOAA and St. Theresa School photos.

Hawaiian Islands Humpback Whale National Marine Sanctuary responds to fifth confirmed entangled humpback whale of the season

On February 7, 2024, Hawaiian Islands Humpback Whale National Marine Sanctuary (HIHWNMS) received a report of another entangled adult humpback whale several miles outside Ma'alaea Harbor, Maui. This was the fifth confirmed large whale entanglement case of the season. The sanctuary's health and risk assessment team had just returned from a full day humpback whale monitoring cruise, but quickly headed back to the research and response vessel, *Koholā*, to mount a rapid response effort to try and free the animal. After arriving on scene, the team conducted an initial risk assessment using a UAS (Uncrewed Aerial System), which determined the male humpback whale was acting as an escort to a female and her calf and had a moderate gauge braided line through its mouth and over its back. A large bundle of line laid on the back with a pair of buoys and no gear trailing. The entanglement was deemed life-threatening. However, considering the limited time available (1 hour until sunset), the team opted for approaches using the *Koholā* and a 22-foot pole with a hooked knife on the end to cut the wrap that laid just aft of the animal's blowhole. The UAS platform remained in the air to help guide the approaches. Unfortunately, the animal was very evasive, and while the team came close, they could not get a knife on the wrap of line. On February 12, the HIHWNMS response team conducted a second effort on the animal while it was the primary challenger in a competition group, but once again due to the animal's evasive behavior, the long distance run, limited time, and a building seastate, the team was unable to free the animal. These were HIHWNMS' seventh and eighth response efforts this season.



Left: HIHWNMS' experienced large whale entanglement responder, Ed Lyman, reaches out with a 22 - foot long carbon fiber pole with a hooked knife on the end to cut a wrap

of line around an adult male humpback whale's head (Photo credit: Rachel Finn/ NOAA MMHSRP, permit # 24359). Right: HIHWNMS' Maria Harvey attempts to navigate the sanctuary vessel, Koholā, close enough for the knife-tipped pole to cut free a humpback whale from a life-threatening entanglement. (Photo credit: Chris Zadra, Ocean Alliance/ NOAA MMHSRP, permit # 24359).

Hawaiian Islands Humpback Whale National Marine Sanctuary partners with Ocean Alliance to broaden use of drones in humpback whale monitoring and response

Hawaiian Islands Humpback Whale National Marine Sanctuary continued their collaborative efforts with the nonprofit organization Ocean Alliance to pursue the broader use of drones in the sanctuary's monitoring and response efforts. The team used drones or Uncrewed Aerial Systems (UAS) to deploy non-invasive CATS (Customized Animal Tracking Systems) suction-cup tags on humpback whales for behavioral and energetic analysis, and collected breath to analyze stress hormones and photogrammetry for condition analysis. In addition, the collaboration further investigated the use of drones to deploy grabbing and cutting tools for a more remote and safer



means of freeing an entangled large whale, and towing underwater cameras for more comprehensive assessment. The collaboration included over 60 UAS flights, seven tags deployed, and providing aerial support during the disentanglement effort of an entangled humpback whale.

A cutting grapple hanging from a drone is deployed on a simulated entangled whale. Photo Credit: Ed Lyman/ NOAA MMHSRP (permit no 24359)



Whalefie: The view from a CATS tag 4K video attached to a humpback whale shows HIHWNMS' research and response vessel, Koholā, in the background. Photo Credit: Whale/ NOAA MMHSRP (permit no 24359)

Lunar New Year Celebration Comes to Kaua`i Ocean Discovery

The Lunar New Year was celebrated throughout Kukui Grove Center on Saturdays, Feb. 10 and 17. On the 17th, Kaua`i Ocean Discovery hosted a visit by a ceremonial Chinese lion and was bestowed with blessings of good fortune, longevity, health, and



peace.

Kaua`i Ocean Discovery volunteers and a Chinese lion exchange offerings and blessings in observance of Lunar New Year celebrations at Kukui Grove Center. NOAA photo by J. Souza

HIHW Builds on Long-standing USCG Partnership

On March 14, HIHW hosted Rear Admiral Michael Day, Commander of the Fourteenth Coast Guard District, Master Chief Andrea "Marty" Martynowski, Command Master Chief for the Fourteenth Coast Guard District, and LT Shane Corbett, Military Aide to

the Rear Admiral, for a day of research and visit to our Kihei visitor center. RADM Day is responsible for directing Coast Guard operations throughout Oceania, including Hawai'i, Guam, the Commonwealth of Northern Mariana Islands, and American Samoa, as well as activities in Singapore and Japan. As the Command Senior Enlisted Leader, CMC Martynowski provides enlisted perspectives to the Commander on all Coast Guard missions throughout Oceania.

The USCG team joined HIHW on a health and risk assessment monitoring trip and was able to experience the excitement and challenge of our work when we surveyed a competition group of approximately 12 humpback whales. We were also able to share information about our long-standing partnership with the USCG, which includes providing annual training for them on rescue and response for entangled humpback whales, collaboration on building compliance with and enforcement of regulations protecting humpbacks and other marine mammals, safety trainings for our boating and response community, and sharing resources and facilities in response to the August 2023 Maui wildfires. The USCG has assisted with nearly half of our whale response missions, and recently provided air and vessel support for a particularly challenging response off the island of Oahu. It is a mutually beneficial, valuable partnership that we hope to build on over the coming years.



HIHW hosted U.S. Coast Guard District 14 leadership for a day of research on board sanctuary vessel, Koholā (photo credit: E. Lyman) HIHW and USCG aboard sanctuary

research and response vessel photo-documenting a group of humpback whales (photo credit: E. Lyman/ NOAA permit 24359)

Successful trial run of new “Nā Kumu ‘o Moloka‘i” (Moloka‘i Teachers) program at HIHWNMS.

On Monday, March 19th, Molokai High School’s biology teacher, Emilio Macalalad, joined the HIHWNMS Health and Risk Assessment Monitoring crew aboard the HIHWNMS’ vessel, Koholā. “Mr. Mac,” as he is called by his students, got an up close and personal look at some of the technology and techniques HIHWNMS uses to gain information on the health of and risk to humpback whales in sanctuary waters. On that day, the team used surface-based, and underwater pole-, and drone-mounted cameras to photo-document the health of (e.g., emaciation), and risk to (e.g., entanglement scars and vessel contact wounds) humpback whales, as well as fluke IDs for population estimate and habitat usage. The team collected blubber biopsies from two female humpback whales with calves near Lahaina. The blubber will be analyzed for stress hormones, zoonotic diseases, and contaminants from the Lahaina fire. The team also used a drone to collect breath samples that will also be analyzed for stress hormones and zoonotic diseases. Throughout the day, Mr. Mac learned about whale behavior: moms and calves, escorts, and competitive groups. He declared that the day was “Amazing!” Mr. Mac was the first teacher to help test the new Moloka‘i teachers’ program, Nā Kumu ‘o Moloka‘i, being developed by HIHWNMS’ state co-manager, Jeannine Rossa.



Harvey; natural resource specialist (team lead), Ed Lyman; Molokai High School biology teacher, Emilio Macalalad; state sanctuary co-manager, Jeannine Rossa; drone pilot, Jason Moore. Right: HIHWNMS research and response vessel, Koholā, monitors a competition group of humpback whales. Moloka‘i High School teacher, Emilio Macalalad, is on the bow to the left.

HIHWNMS Research Ecologist presents findings at international biologging conference

Between 4-8 March HIHWNMS Research Ecologist Dr. Marc Lammers attended the 8th International Biologging Science Symposium. This conference is held every 3 years and convenes the world's experts in the field of biologging, which is the study of animals and their environment using animal-attached tags. He presented a poster titled "Temporal variations in humpback whale behavioral activity on the Hawaiian breeding grounds." The presentation describes results from the sanctuary's tagging research which show that humpback whales off west Maui spend more time, on average, resting during the afternoon hours and have higher activity levels during the nighttime hours. These findings are relevant to the management and conservation of humpback whales on their Hawaiian breeding grounds where they are the focus of intense public and commercial whale watching activities. A better understanding of whales' natural behavioral cycles could lead to more effective viewing guidelines. The findings presented included results that were generated by a NOAA Hollings intern, Cameron Larmer, who worked with HIHWNMS in 2022 and 2023. In addition to sharing results with the biologging community, Dr. Lammers also made valuable networking connections at the conference that are likely to lead to future collaborative work.

HIHWNMS science featured on PBS Kids show Wild Kratts

On 1 April HIHWNMS Research Ecologist Dr. Marc Lammers and colleagues Dr. Adam Pack (University of Hawaii at Hilo) and PhD student Julia Zeh (Syracuse University) were featured in a special episode of the popular PBS Kids show Wild Kratts that focused on conservation, climate change and linking the importance of land-based and marine-based ecosystems, much like Hawaii's ahupua'a system. The Wild Kratts film crew joined a tagging mission aboard the R/V Kohola in March of 2023. The research team's work is featured at the end of the episode with interviews and clips of tag deployments on whales. The popularity of the show among young children provides a unique opportunity to leave a positive impression of the sanctuary's work on the next generation of nature lovers and scientists. After being on YouTube for only 3 days the episode had already been viewed 225,000 times. The full episode can be found [here](#).



Photo caption: Wild Kratts crew aboard R/V Kohola. From bottom left to right: Chris Kratt, Nick Shaw, Dr. Adam Pack, Martin Kratt and Dr. Marc Lammers

HIHWNMS News Clips

[Girl Scouts of Hawai'i host annual STEM Fest events](#)

Lahaina News - National Marine Sanctuary on Maui

HIHWNMS

[Incredible Moment Captured: Watch Humpback Whale Birth Near Lahaina - Beat of Hawaii](#)

Beat of Hawaii-NOAA's Hawaiian Islands Humpback Whale National Marine Sanctuary, established a quarter-century ago, plays a crucial role in protecting humpback ...

[Metlakatla Indian Community Team recognized by NOAA for entanglement response](#)

Local First Media Group-NOAA's Hawaiian Islands Humpback Whale National Marine Sanctuary; NOAA Fisheries Alaska Large Whale Entanglement Response.

<https://www.travelpulse.com/voices/blogs/sail-away-to-the-hawaiian-islands>

Sail Away to the Hawaiian Islands

[When and where to watch whales for free in Hawai'i \(hawaiionthecheap.com\)](#)

Hawaii on the Cheap-Humpback Whale National Marine Sanctuary Visitor Center. The view from the scenic beachfront on the south shore of Maui sweeps across the waters ...

[After the Fire, Lahaina's Whales Are Left in the Lurch | Hakai Magazine](#)

Hakai Magazine-Lyman leads the region's whale disentanglement team for the Hawaiian Islands Humpback Whale National Marine Sanctuary. And in the fire's wake, he ...

[2024 Sanctuary Ocean Count welcomes back whales and volunteers - Maui Now](#)

Maui Now-Hawaiian Islands Humpback Whale National Marine Sanctuary welcomes back koholā (humpback whales) and volunteers for the 2024 Sanctuary Ocean Count ...

<https://www.forbes.com/sites/geoffwhitmore/2024/01/16/6-best-places-to-visit-in-hawaii-for-an-unforgettable-trip/?sh=3d0c66ca7c68>

6 Best Places to Visit in Hawaii for an Unforgettable Trip

[VNR: Humpback whale singers move depending on time of day | University of Hawaii News](#)

University of Hawaii System-The findings were led by the University of Hawai'i, in partnership with NOAA's Hawaiian Islands Humpback Whale National Marine Sanctuary, and ...

[NOAA Releases Latest Marine Sanctuary Poster - DeeperBlue.com](#)

DeeperBlue.com-NOAA's Office of National Marine Sanctuaries has released the latest sanctuary poster featuring the Hawaiian Islands Humpback Whale National ...

<https://kauainownews.com/2024/01/28/nearly-300-humpback-whales-sighted-off-kauai-shores-on-saturday/>

Nearly 300 humpback whales sighted off Kauai Shores

[2124 whales observed during first Sanctuary Ocean Count and Great Whale Count of 2024](#)

Maui Now... National Marine Sanctuary Ocean Count and from Maui and Lānaʻi during ... (1.27.24) PC: Jennifer Strahl / Hawaiian Islands Humpback Whale National ...

[Public is reminded to keep a safe distance with the return of humpback whales - Kauai Now](#)

Kauai Now... National Marine Sanctuary. Hawaiian Islands Humpback Whale National Marine Sanctuary is one of the world's most important whale habitats and the ...

[Researchers discover whales make daily onshore-offshore migrations - Spectrum News](#)

Spectrum News 1-The researchers, who worked in partnership with NOAA's Hawaii Islands Humpback Whale National Marine Sanctuary, published their findings in “Royal ..

[Whale sanctuary reminds boaters: 'Go slow for whales below' - Maui Now](#)

Maui Now... National Marine Sanctuary. “Collisions with whales are a very real risk for the next several months, and ask that you remain vigilant and slow ...

[Coast Guard, partners join forces for humpback whale safety](#)

USCG News - Coast Guard-Hawaiian Islands Humpback Whale National Marine Sanctuary (HIHWNMS) is one of 15 National Marine Sanctuaries designated as special areas set aside ...

[Sanctuary Ocean Count starts for 2024 - The Garden Island](#)

The Garden Island... National Marine Sanctuary Ocean Count (HIHWNMS), and during the Great Whale Count by the Pacific Whale Foundation, which collected data from Maui ...

[402 volunteers gather to observe and count humpback whales - Spectrum News](#)

Spectrum NewsThe Hawaiian Islands Humpback Whale National Marine Sanctuary Ocean Count was held on Kauai, Oahu, Molokai and Hawaii Island. The Pacific Whale ...

[Nearly half of the world's migratory species are in decline, UN report says | AP News\(1800 news stories\)](#)

AP News... National Marine Sanctuary shows an entangled subadult humpback whale that was freed of gear by a team of trained responders off Makena Beach, Hawaii.

[Kayakers, paddleboarders get illegal close encounters with humpback whales - Hawaii News Now](#)

Hawaii News Now-According to wildlife expert Ed Lyman of the Hawaiian Islands Humpback Whale National Marine Sanctuary, federal law says the public cannot approach ...

[Operation Kohola Guardian Aims To Reduce Risk To Humpback Whales In Hawaiian Islands](#)

DeeperBlue.com-The Hawaiian Islands Humpback Whale National Marine Sanctuary is one of 15 National Marine Sanctuaries designated as special areas set aside for ...

[2141 whales observed during the second Sanctuary Ocean Count and Great Whale Count for 2024](#)

Maui Now-Hawaiian Islands Humpback Whale National Marine Sanctuary Ocean Count at Hawaiian Paradise Park on Hawai'i Island. (2.24.24) PC: George Correa ...

[Whale calf injury off Mā'alaea, Maui is likely from a vessel strike, boaters urged to keep distance](#)

Maui Now-Through this initiative, the Hawaiian Islands Humpback Whale National Marine Sanctuary ... National Marine Sanctuary. While the calf's future remains ...

[A.I. Sorts Public Photos to Show Recovering Pacific Humpback Whales Hit Climate Ceiling](#)

NOAA Fisheries... National Marine Sanctuary, “but also the effects from other risk factors, such as entanglement.” Photos Cover the Globe. About two-thirds of the ...

[Deaths of Young Dolphin, Humpback Calf Highlight the Importance of Responsible Boating](#)

NOAA Fisheries-NOAA researchers with the Hawaiian Islands Humpback National Marine Sanctuary assess an injured humpback whale calf off of Maui. The calf had ...

[Kamakai the humpback is here! - The Garden Island](#)

The Garden Island-Jean Souza, the Hawaiian Islands Humpback Whale National Marine Sanctuary program specialist and the Kaua'i Ocean Discovery on-site manager, makes ...

[Your Ultimate Guide To Spring Attractions And Activities In Hawaii](#)

OnlyInYourState-5. Hoolulu Park · 6. Wai'anapanapa State Park · 7. Hapuna Beach State Recreation Area · 8. Hawaiian Islands Humpback Whale National Marine Sanctuary ..

[Volunteers count total of 855 koholā in final whale count of 2024 - Spectrum News](#)

Spectrum News-The Hawaiian Islands Humpback Whale National Marine Sanctuary held its Ocean Count on Kauai, Oahu, Molokai and Hawaii Island with 424 volunteers while ...