

Aloha & Welcome

79th HIHWNMS

Sanctuary Advisory Council Meeting

Tuesday, November 12, 2019

10 am – 3:00 pm

Public Comment: 2:30 pm

10:00 AM – 10:45 AM

WELCOME

- Protocol (Moani Pai and MDC Staff)
- Introductions and Council Business (Sol Kaho'ohalahala)
 - Roll call; review and approval of agenda
 - Introductions of new SAC members
 - Review and approval of August 13, 2019 Meeting Minutes
 - Brief review and summary of previous issues, action items, and status
 - Completed: Kaua'i Office to a New Discovery Center resolution
 - In progress: SAC recruitment

10:45 AM – 11:00 AM

SUPERINTENDENT UPDATE (ALLEN TOM)



NATIONAL MARINE SANCTUARY SYSTEM



Kapa'a High School receives Ocean Guardian funding



Kaua'i: A New ONMS Model for an Interpretive Facility



Ocean Count



- **Saturday, January 11, 2020: O'ahu Site Leader Volunteer Training**
 - Time: 10:30 am - 12:30 pm
 - Location: NOAA Fisheries Pier 38 Conference Room
- **Sunday, January 12, 2020: Kaua'i Site Leader Volunteer Training**
 - Time: 10:00 am - 12:00 pm
 - Location: Kukui Grove Center
 - 3-2600 Kaumualii Highway, Suite F4
 - (Next to Deli & Bread Connection, near Macy's)
 - Lihue, Hawaii 96766
- **Saturday, January 18, 2020: Hilo Site Leader Volunteer Training**
 - Time: 10:30 am - 12:30 pm
 - Location: Mokuapāpapa Discovery Center
 - 76 Kamehameha Ave, Hilo, HI 96720
- **Saturday, January 25, 2020: January Ocean Count Event**
 - Time: 8:00 am - 12:15 pm
- **Saturday, February 29, 2020: February Ocean Count Event**
 - Time: 8:00 am - 12:15 pm
- **Saturday, March 28, 2020: March Ocean Count Event**
 - Time: 8:00 am - 12:15 pm

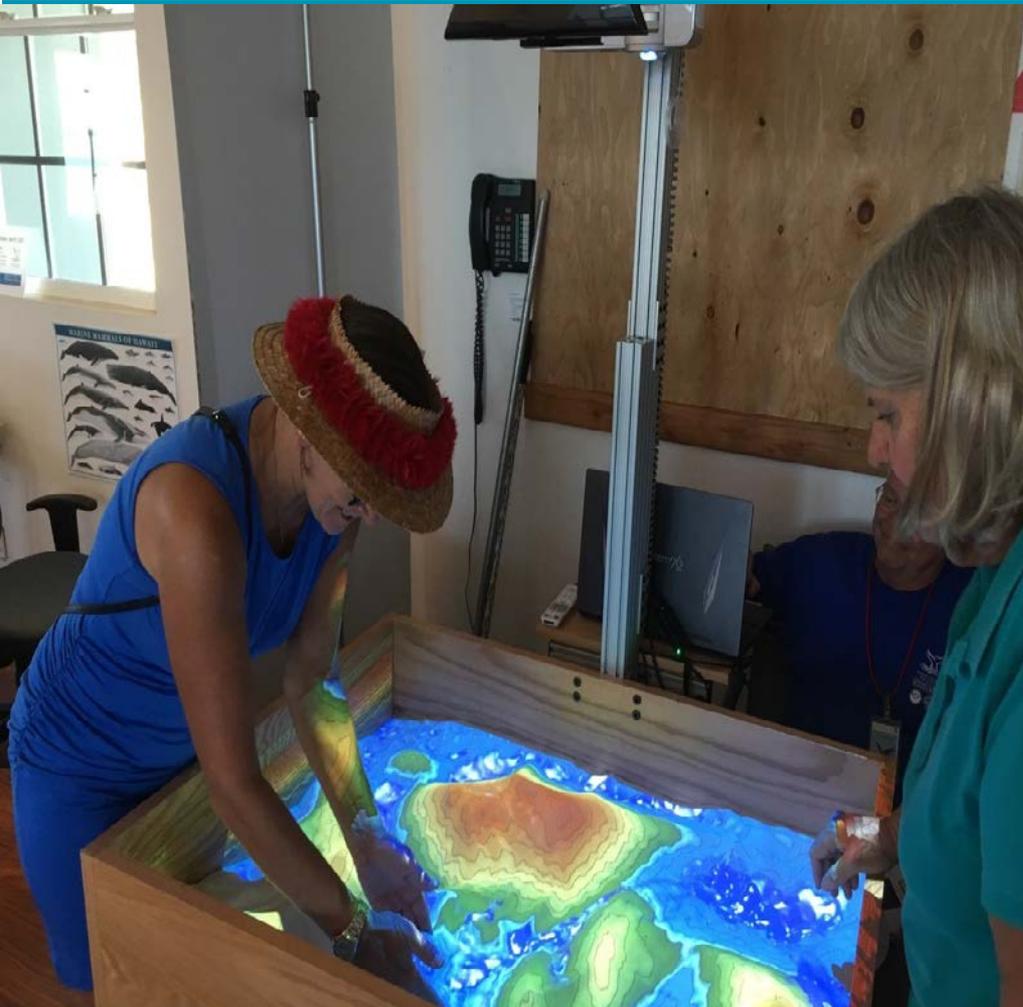
Kamakai



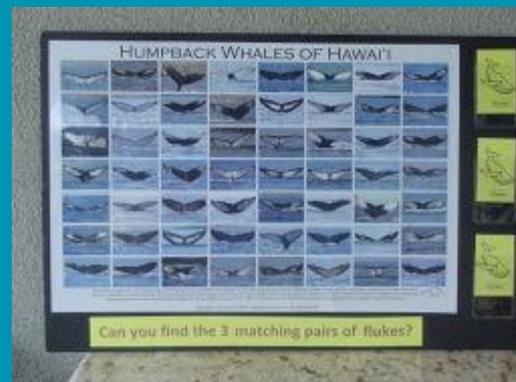
Culture and Place



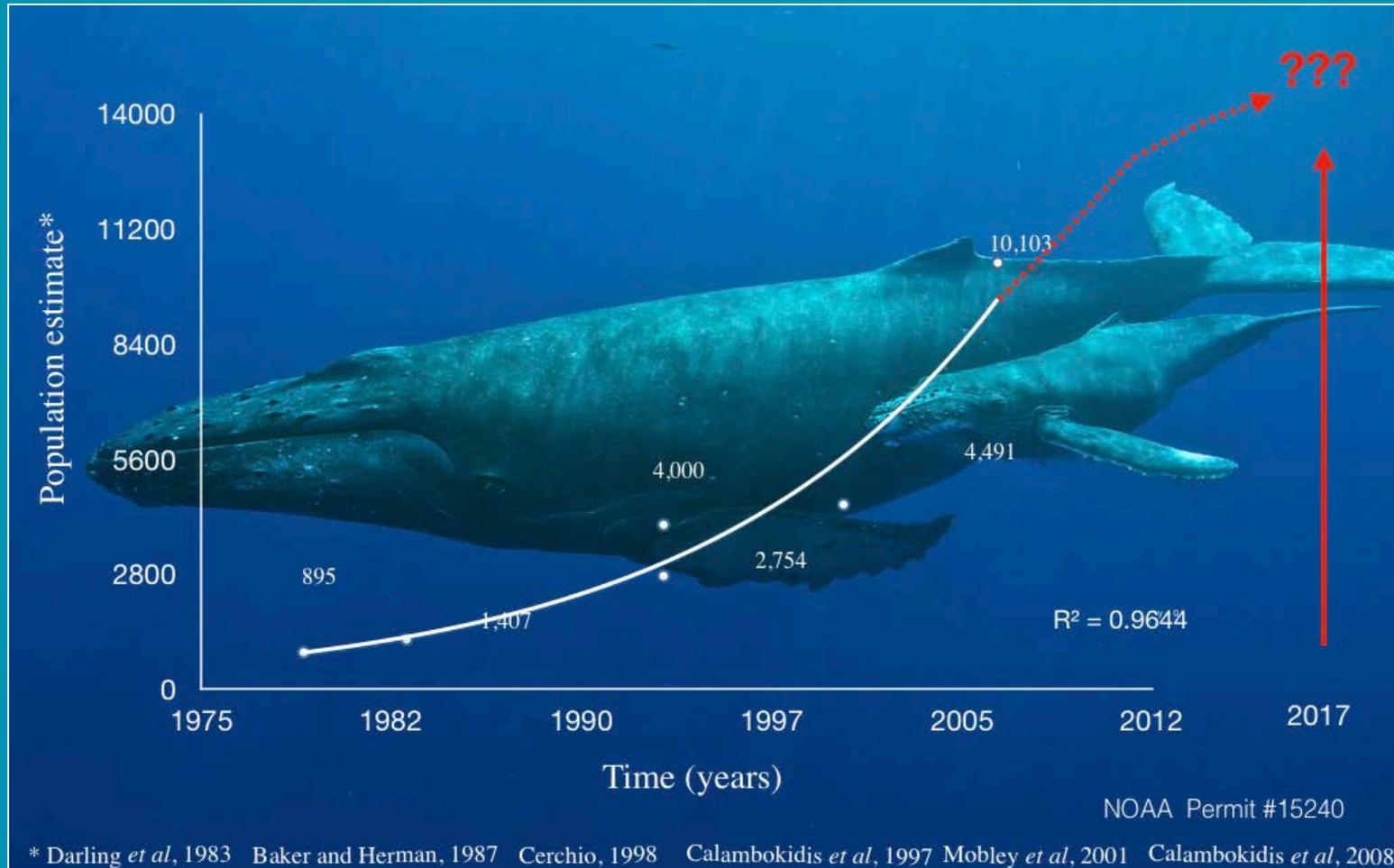
Teacher workshops



West Hawai'i



Historical trends in the number of whales wintering in Hawai'i



HIHWNMS resource needs



- Personnel needs:
 - Field assistant(s) during whale season to help with vessel and shore-based surveys
 - Analytical support for data analysis (survey, tagging, acoustic)
- Equipment/supplies needed:
 - CATs camera tag
 - DSLR camera and lens
 - VHF tags (2)
 - VHF receiver & antenna
 - GoPro
 - iPad
 - Software licenses
- Long-term funding needs:
 - Hawaii mini-SPLASH
 - Support for local research partners

Get involved with us !!



11:00 AM – 11:10 AM

**STATE OF HAWAI‘I DAR UPDATE
(JEANNINE ROSSA)**



11:10 AM – 11:20 AM

**REGIONAL DIRECTOR UPDATE
(KRISTINA KEKUEWA)**



11:20 AM – 11:30 AM

BREAK



11:30 AM – 12:30 PM

**HISTORY AND TOUR OF FACILITY
(MDC STAFF)**

***FOLKS ONLINE PLEASE REJOIN ZOOM
MEETING BACK BY 12:30 PM FOR A
WORKING LUNCH**

12:30 PM – 1:45 PM

WORKING LUNCH

- Video: Explore the Blue – 360 Hawaiian Experience
- HIHWNMS Science/Resource protection Update (Marc Lammers/Ed Lyman)

VIDEO: EXPLORE THE BLUE – 360 HAWAIIAN EXPERIENCE

<https://www.youtube.com/watch?v=FPc0DLjAfTM&feature=youtu.be>

Research activities at HIHWNMS during 2019-2010 whale season



Dr. Marc Lammers
Research Coordinator
NOAA/ONMS/HIHWNMS

**November 12, 2019 HIHWNMS
Sanctuary Advisory Council
Presentation**

NOAA Fisheries permit #14682





Hawaii's "missing" whales



HAWAII NEWS

Humpback whale sightings around Hawaii declining

By [Nina Wu](#) · Sept. 30, 2018

Whale researchers are spotting a trend in the Hawaiian Islands — a decline in humpback whale sightings. [Read more](#)

khon2 NEWS LIVE NEWS WEATHER SPORTS WAKE UP ZDAY LIVING360 COMMUNITY

LOCAL NEWS

Where are the humpback whales?

[f](#) [t](#) [w](#) [m](#) [e](#) [+](#)



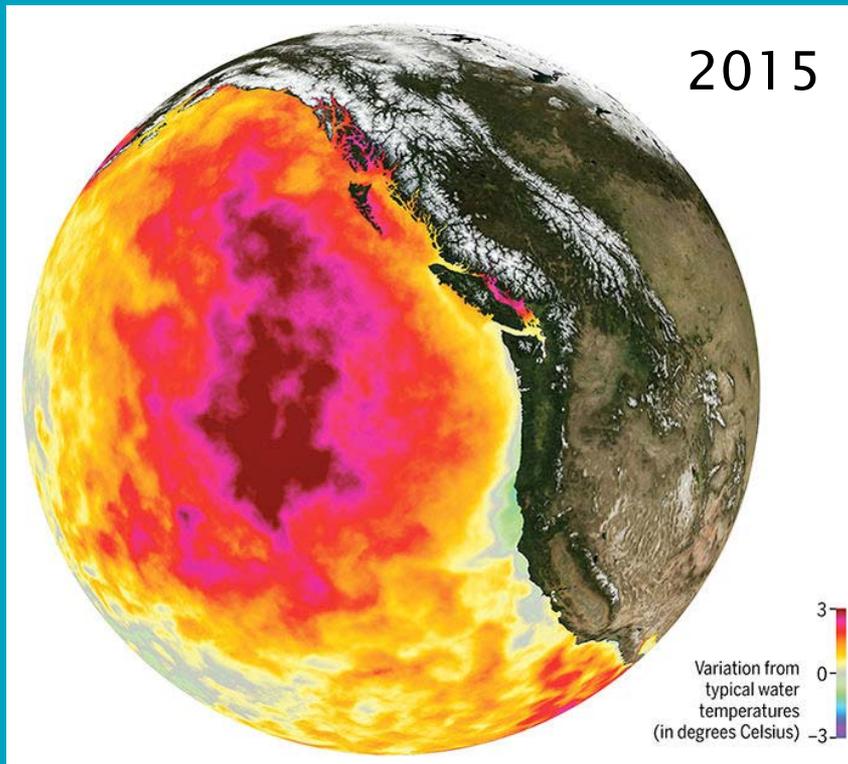
CIVIC » Best Countries Best States Healthiest Communities Cities The Civic Report Photos News Events America 2020

HOME / CIVIC / BEST STATES / HAWAII NEWS

Humpback Whale Sightings Becoming Less Common Around Hawaii

Researchers say humpback whale sightings are becoming less common in the Hawaiian Islands.

What happened?!



- 2013-2016 a marine heat wave (“the blob”) in NE Pacific combined with El Nino and PDO warming, resulting in:
 - Changes in ocean circulation
 - Disruptions in nutrient flow
 - Reduction in primary productivity
 - Trophic collapse at multiple levels (copepods, krill, cod, murre)
- Humpback whales were likely affected in various ways (e.g. changes in foraging/migration patterns, mortality)

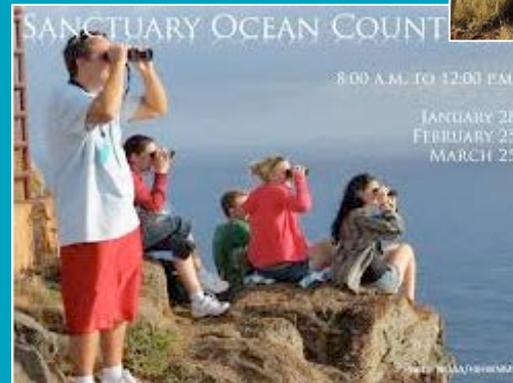
Gentemann, C., *et al. Geophysical Research Letters* 44.1, 312, (2017)



HIHWNMS research activities during 2019-2010 season



- Continued acoustic monitoring at 6 long-term Maui Nui sites to extend current time series documenting changes in chorusing levels
- Weekly shore station surveys off Olowalu to continue correlating visual counts with acoustic measurements
- Collection of Ocean Count data in partnership with PWF to examine whale abundance trends across islands

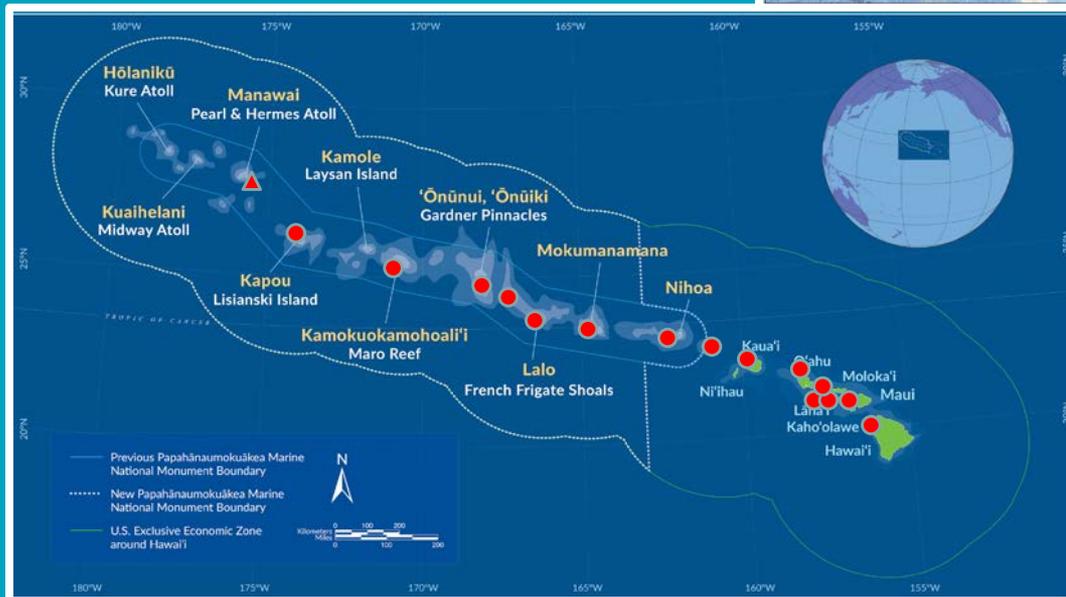




SanctSound Project



3-year ONMS-wide effort to study the soundscapes of 7 National Marine Sanctuaries and 1 Marine National Monument funded by the U.S. Navy through a legal settlement

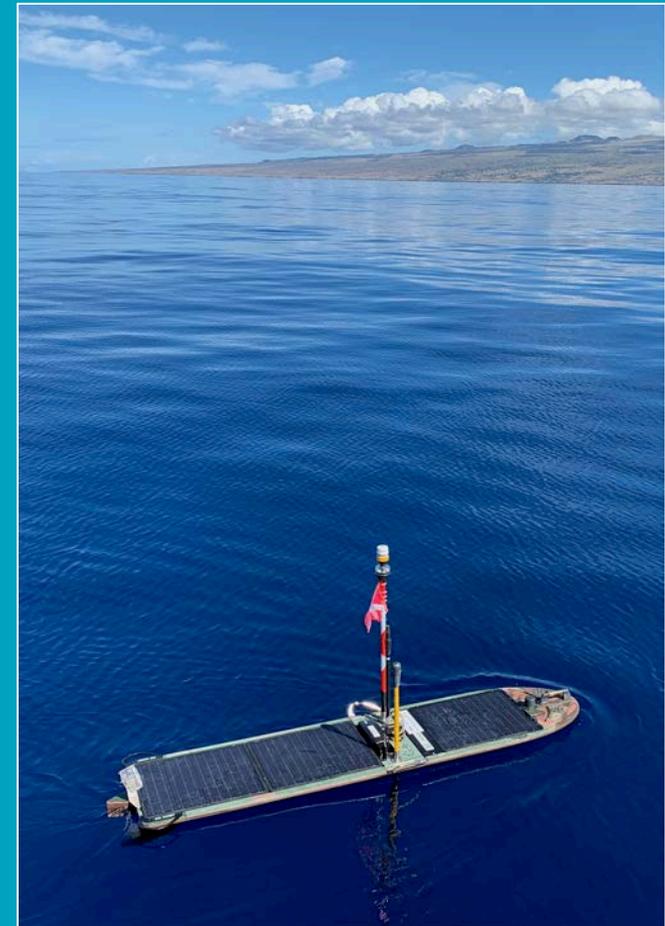




Wave Glider mission to PMNM



- Collaborative project between ONMS, Navy and Jupiter Research Foundation
- A Wave Glider will acoustically explore the banks of PMNM for the presence of whale song between January-March 2020

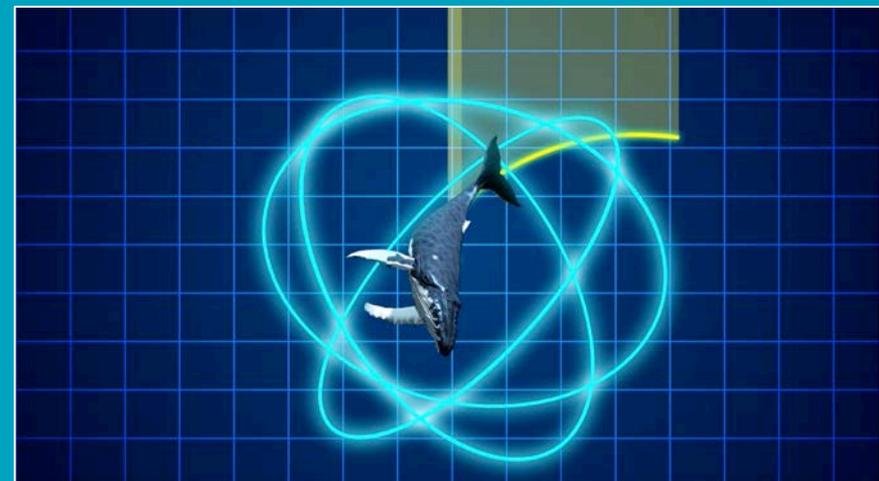




Tagging studies

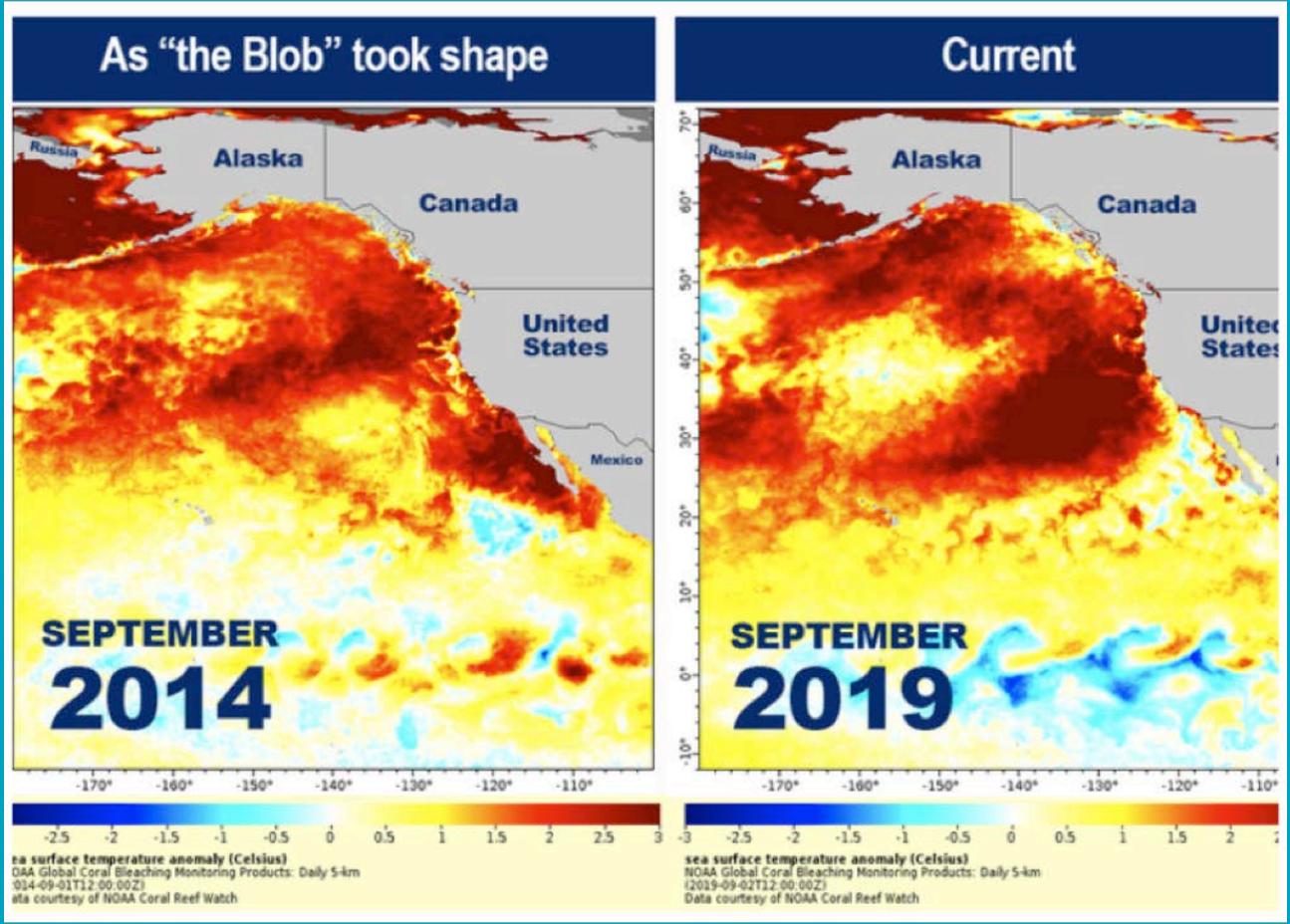


- Long-term collaboration with HIMB and UH-Hilo
- Temporary suction cup tags are deployed on whales using a pole
- Tags record sound, whale movements and dive depth.
- Data are used to study whale behavior, communication, exposure to noise and habitat use
- Objectives will be to quantify whale activity levels and study their nighttime behavior



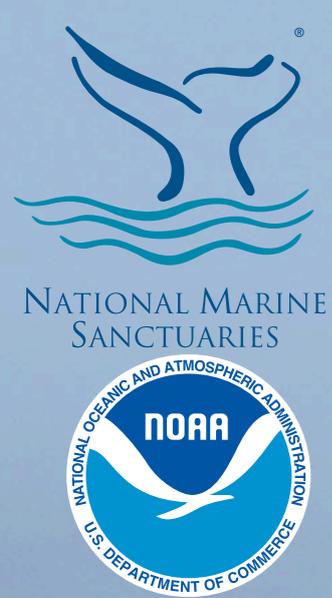


Trouble on the horizon...





Questions?



Sanctuary Health and Risk Assessment Monitoring, and Entanglement Response Programs



Nov 12, 2019, SAC Meeting

Ed Lyman

Natural Resource Specialist

Hawaiian Islands Humpback Whale

National Marine Sanctuary

NOAA Fisheries' Marine Mammal Health and Stranding Response Program





Health and risk assessment: 2019-2020 Season



Continue:

- Scheduled/ dedicated monitoring cruises
- Receiving opportunistic reports from on-water community
- Near-realtime response (*e.g.* separated calf, animal in distress, ship-strike, entanglement)



NOAA permit # 15240

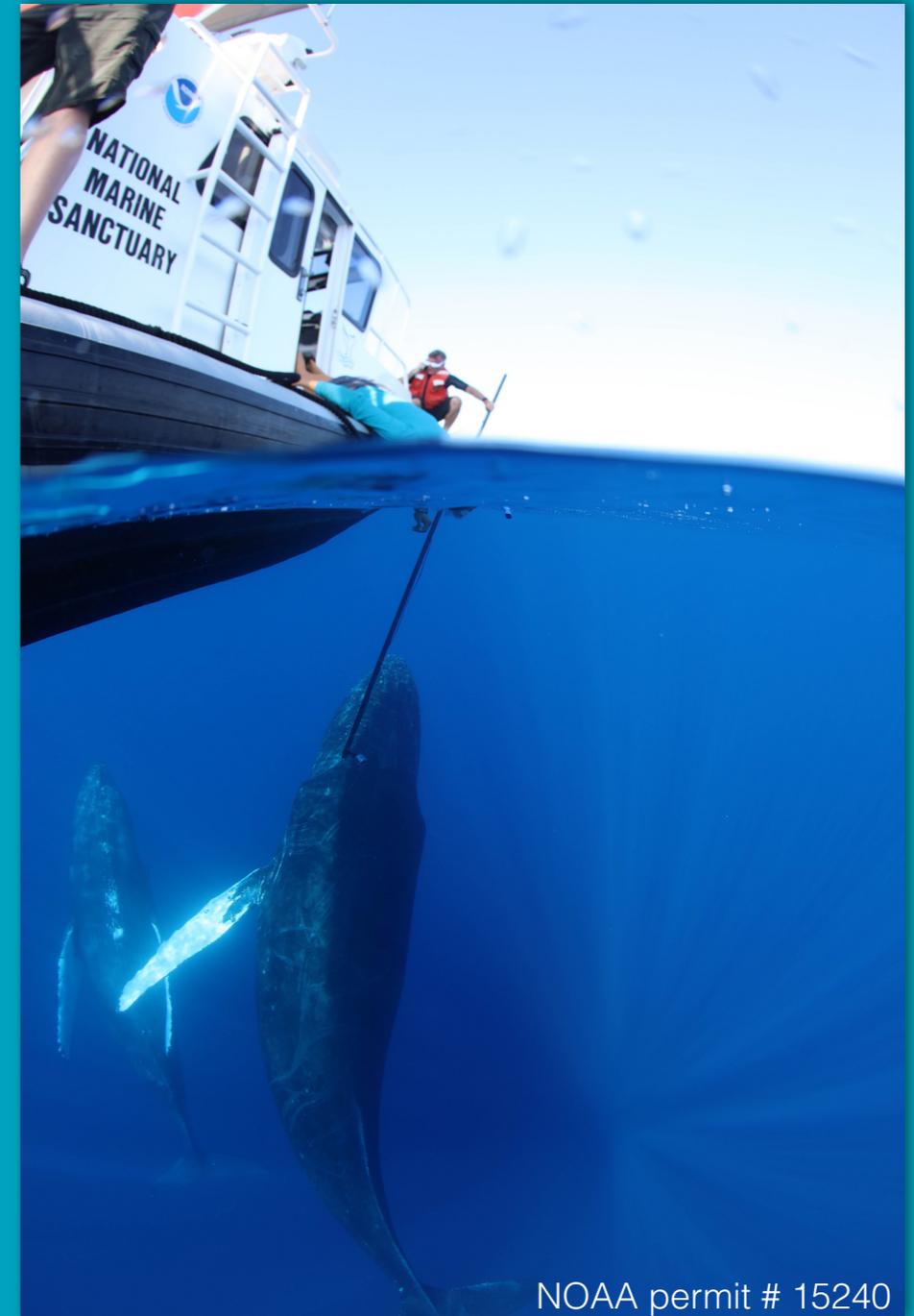


Health and risk assessment: methodology/ strategies



Continue:

- Sighting rates (*e.g.* opportunistic transects)
- Fluke IDs (>1600 individuals; contribute to HappyWhale; population estimation and more...)
- Behavioral information (*e.g.* group dynamics, timing)
- Visual condition indices (*e.g.* emaciation, wound presence, skin condition, cyamid cover)
- Scar analysis towards entanglement impact
- Broader assessment through partnering (*e.g.* transects, acoustics, biopsies)



NOAA permit # 15240



Community-based transects



- Use of vessels-of-opportunity to increase transect spatial effort
- Greater partnership with community (and volunteers)
- Presently 5 platforms for Maui Nui
- Information (along with monitoring data-logger) can be shared with community (e.g. Visitor Centers)

transect datalogger

Welcome [redacted] transect app and Mahalo for helping us monitor Hawaii's humpback whales. This app will help provide you with a simple means to log humpback whale sightings during a linear transit between two points meeting the following criteria:

1. Trip not interrupted (e.g., vessel stopped for viewing a whale or other reason more than a few minutes). Note: if interrupted for more than a few minutes, the transect can be stopped and a new one created.
2. Beaufort sea state of 5 or less (< 21 kts)
3. Visibility 5 miles or greater
4. Glare on water of less than 50% (90° of 180° arc being viewed)
5. Use of an observer(s) with required training

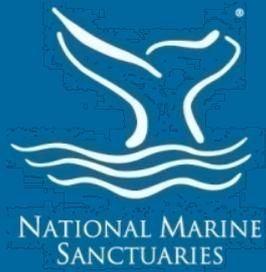
If these conditions are met and able to proceed, please log-in your vessel and observer(s), and select "Start New Transect"

How to use the logger and what to log

Vessel: Observer 1:
Observer 2:

Transects 2 # Sightings 4
Distance Traveled Total Time 0:01:18
Animals/Mile

Start Date/Time	Observer	Distance	Sightings		
11/9/2019 6:35:51 PM	Captain Kiki		3	<input type="button" value="edit"/>	<input type="button" value="delete"/>
11/9/2019 6:21:16 PM	Captain Dave		1	<input type="button" value="edit"/>	<input type="button" value="delete"/>



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Vessel: Observer 1:

Speed: Observer 2:

Sighting: 1

One Three 5-8 >12
 Two Four 9-12

Distance:

w/i 50M 300 M .75 mile
 100 M .25 mile 1 mile
 200 M .5 mile > 1 mile

Bearing:

Group Type:
 MC MCE CG Unknown

Beaufort:

Weather:

Time:

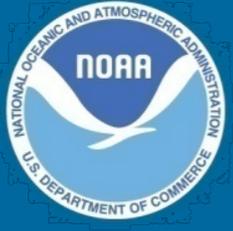
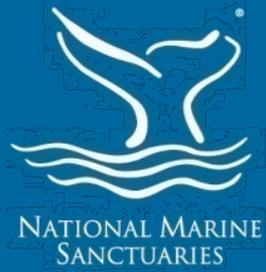
Location:

Start Time: End Time:

Start Location: End Location:

Summary:
Distance: Time: Animals/Mile: Sightings:

Ocean Count on the water



Documentation: Science, outreach and resource protection



- Standard Digital SLRs
- Hand-held underwater cameras
- Pole-mounted camera
- Cameras mounted on helmets, the boat, and other platforms (e.g. drones)



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- Standard Digital SLRs
- Hand-held underwater cameras
- Pole-mounted camera
- Cameras mounted on helmets, the boat, and other platforms (e.g. drones)



Sanctuary Health and Risk Assessment: New and improved documentation tools

- Drones/ Mast-cam
- ARM (Assessment, Recording, and Monitoring)
- VR/ 360° cameras
- On the whales (suction-cup acoustic and video tags - Marc)



Large Whale Entanglement Response



March 6, 2019
Entangled subadult humpback whale
off Maui

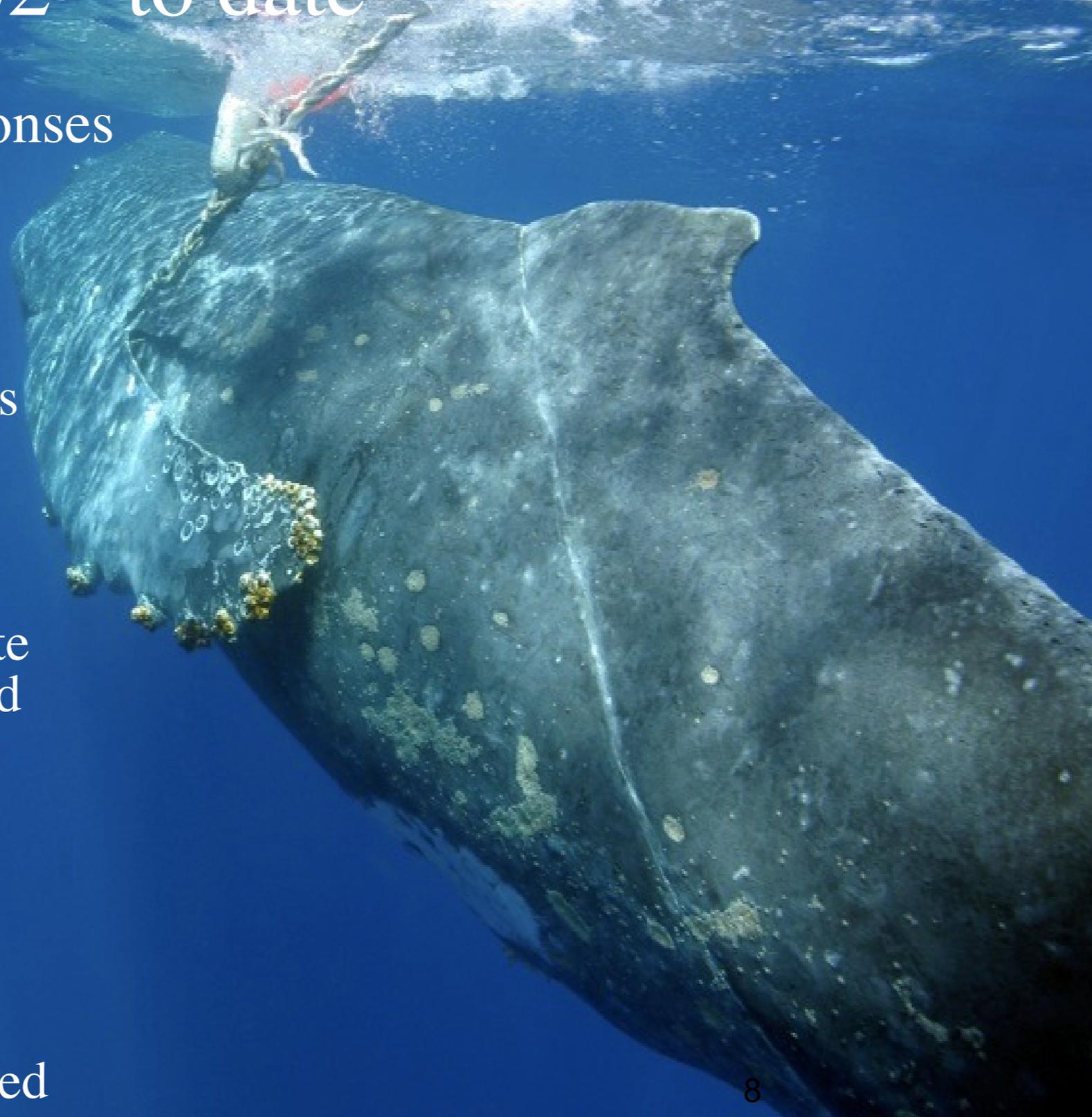


Hawai'i accomplishments

2002 - to date

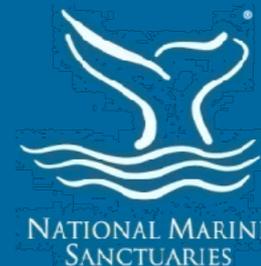
Mounted more than 180 responses

- Gear removed from 32 whales
- 28 animals (27 humpback whales and 1 sei whale) freed of significant amount of gear
- Representing a ~43% success rate toward those cases warranted and able
- More than 12,000 feet of line removed
- More than 70 sets of gear removed or documented identified.





Drone use towards response



- Used since 2016
- ~35% of responses
- Three drone partnerships
- Latest effort with ONMS UAS team
 - Semi-autonomous
 - Tethered
 - Film training/ whales



Planck Shearwater UAS





Other new tools and techniques



- Real-time goggles
- New cutting grapple
- Sinking line
- Double-edged knives
- VOX headsets



Reduce our spatial/ temporal proximity to animals
(reach further, deeper, get to tight wraps)



Trainings/ preparation



- Reduce risk (Dozens of trainings; > 100 hrs)
- Trainings evolve with experience (more scenario driven)
- On-line first responder course
<http://pacific-islands-training.whaledisentanglement.org/>
- Train others (apprenticeship)
- Asked to take lead in drafting Best Practices



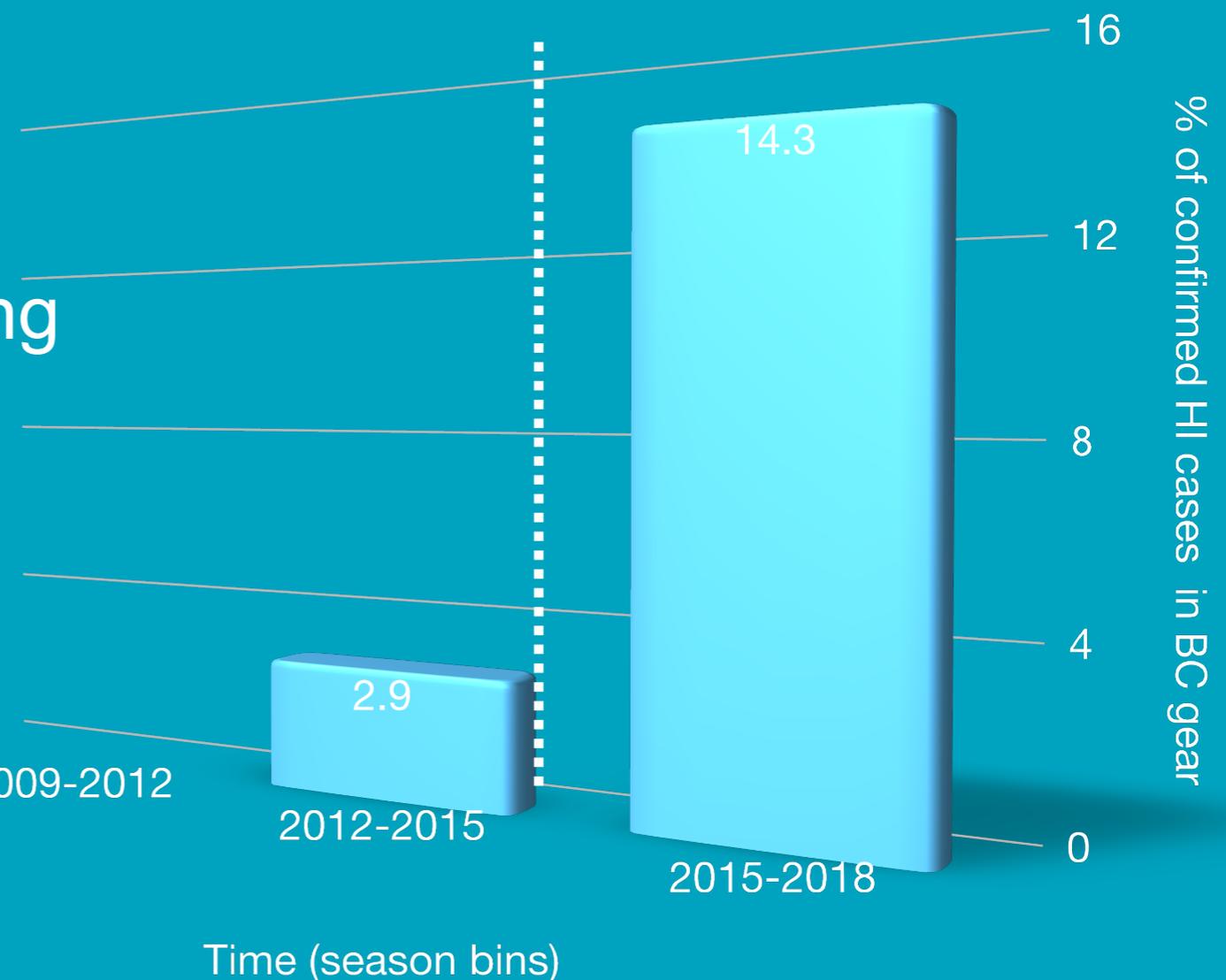
Mahalo nui loa to Maui Fish Pond for use of buoy



Gaining information towards reducing entanglement threat



- Impact - Serious Injury Determinations (in partnership with PIFSC)
- Magnitude and impact (reporting and scar studies)
- Gear investigation (e.g. type, part, fishery? and source)
- Demographics (e.g. age, sex, temporal aspects)
- Mitigation (e.g. pingers)

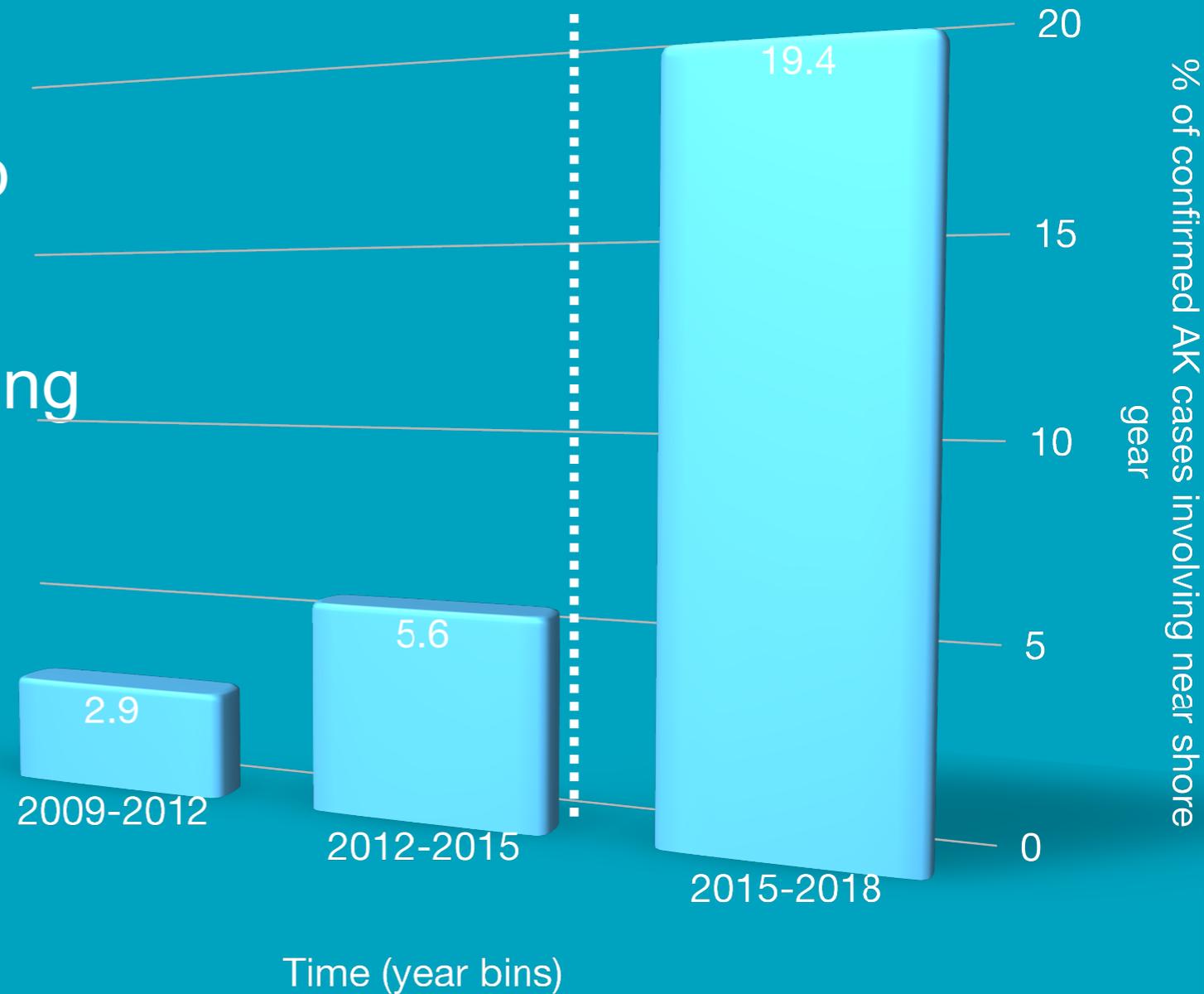




Gaining information towards reducing entanglement threat

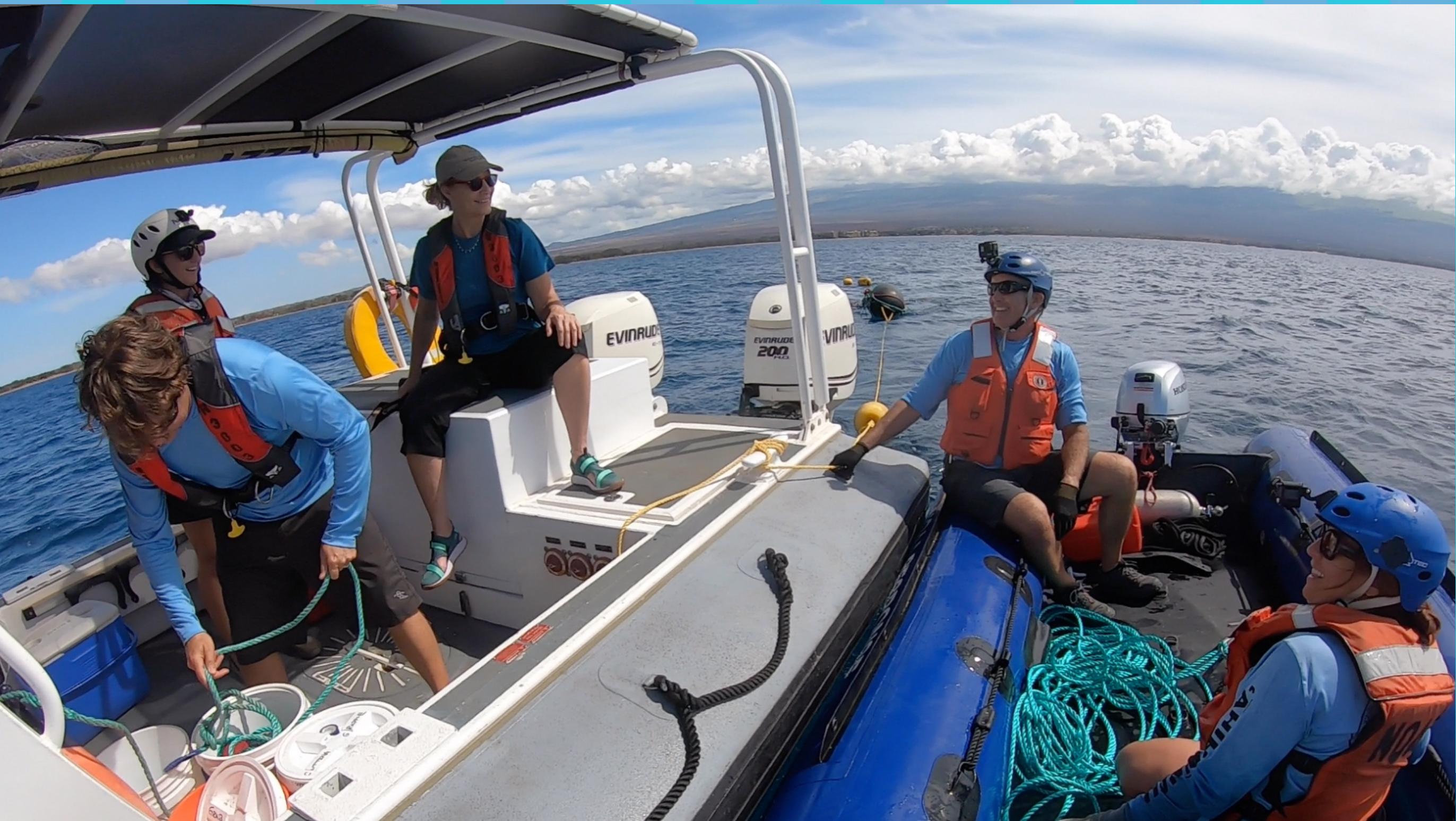


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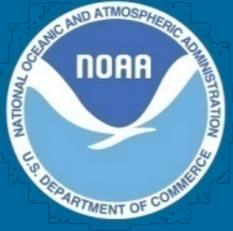
Forecasting 2019-20 Response Season



Acknowledgements

- Hawaiian Islands Humpback Whale National Marine Sanctuary
- NOAA Office of Protected Resources
- NOAA Fisheries Pacific Region Office
- NOAA Fisheries Pacific Islands Fisheries Science Center
- NOAA Office of Law Enforcement
- Hawaii Department of Land and Natural Resources
- U.S. Coast Guard/ CG Aux. (D14)
- NOAA Corps
- Fishers (Commercial, sport, recreational)
- Whale researchers and NGOs
- Existing Network members
- Commercial tour operators
- Navy
- Watermen (other ocean-users)
- Hawaiian Community

All response activities on endangered whales are conducted under NMFS permit 18786-04 issued to the Marine Mammal Health and Stranding Response Program.



Mahalo

Any questions?



1:45 PM – 2:00 PM

**UPCOMING EVENTS
(CINDY AMONG-SERRAO)**



2019 Ocean Count Recap

Volunteers

- January 26: 456
- February 23: 502
- March 30: 349
- Total: 1307

public outreach

- January 26: 676
- February 23: 786
- March 30: 824
- Total: 2286

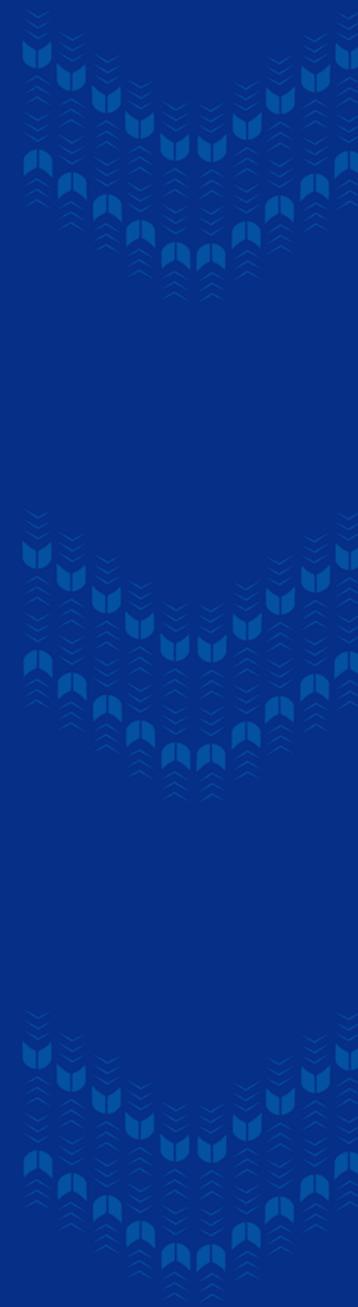
2019 Ocean Count + Maui PWF Great Whale Count Recap

Volunteers

- Total: 1618

public outreach

- Total: 2286
- Maui doesn't track this # but perhaps in the future!



Words from volunteers!

“Every year participating, brings new experiences which can translate to knowledge”

“I LOVE helping out with this count.”

“Team leader very well knowledgeable”

“Site leaders were very knowledgeable in explaining facts about whales and very well prepared in answering questions”

“It exceeded my expectations”

“I didn't exactly know what to expect but I had a great time! Site leaders and other counters were super friendly and hospitable. Lots of whales, lots of aloha”

“Our site leaders were very informative”

“A wonderful experience / great people and an awesome site”

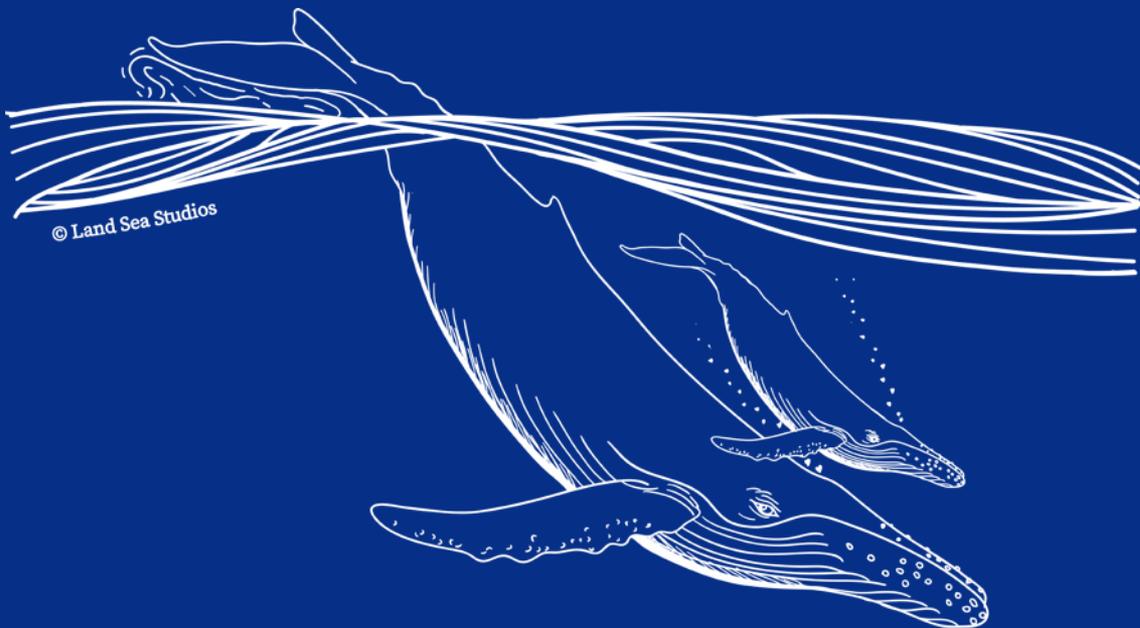
“Excellent team leader with very useful information”

2020 OCEAN COUNT

- Site Leader trainings:
 - O‘ahu: January 11, 2020
 - Kaua‘i: January 12, 2020
 - Hilo: January 18, 2020
- Event dates:
 - January 25, 2020
 - February 29, 2020
 - March 28, 2020

2020 OCEAN COUNT

- Ways to help or get involved?
 - Volunteer
 - Encourage school/club groups to volunteer
 - Spread the word about Ocean Count and the t-shirt once it is launched



2:00 PM – 2:30 PM

NEXT STEPS

- Potential 2020 Meeting dates:

- Tuesday, April 7, 2020

- Tuesday, August 4, 2020

- Tuesday, November 17, 2020

*Will these work for folks? If so, please save these dates

- Potential 2020 Meeting locations:

*Determine which meeting for which location!

- Kaua'i

- Honolulu

- Teleconference

2:00 PM – 2:30 PM

NEXT STEPS CONT.

- Process for selection of new members
 - New SAC recruitment review committee?
- Acknowledge departing members:
 - Rick Gaffney
 - Sabra Kauka

2:30 PM – 3:00 PM

PUBLIC COMMENT



3:00 pm: Pau!

Mahalo!