



**PAPA HĀNAUMOKUĀKEA**  
**Marine National Monument**

*A World Heritage Site*

# Update on East Island Recovery Post - Hurricane Walaka

Reserve Advisory Council Meeting  
Inouye Regional Center, Ford Island  
June 6, 2019

Presented by: Brian Hauk for Keolohilani Lopes  
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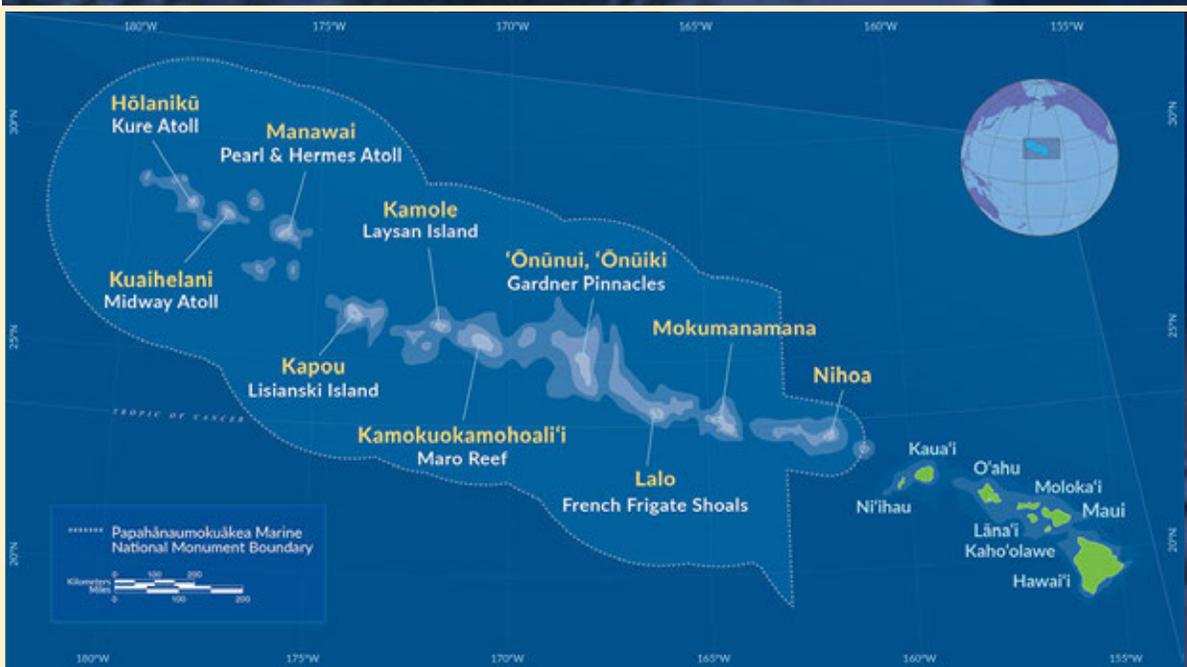




# PAPA HĀNAUMOKUĀKEA Marine National Monument



Photo: Civil Beat



French Frigate Shoals

14.1 km

Data: SIO, NOAA, U.S. Navy, NGA, GEBCO  
Data: LDEO-Columbia, NSF, NOAA  
Image © 2019 DigitalGlobe  
Image: Landsat / Copernicus

Google Earth

# National and International Headlines

## East Island, Remote Hawaiian Sliver of Sand, Is Largely Wiped Out by a Hurricane



### Remote Hawaiian island vanishes underwater after hurricane

USA TODAY NETWORK Josh Hafner, USA TODAY Published 6:33 p.m. ET Oct. 24, 2018 | Updated



(Photo: Twitter/@NathanEagle)

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A remote Hawaiian island vanished underwater after powerful hurricane struck earlier this month, according to federal officials citing satellite images.

East Island, a strip of gravel and sand northwest of Honolulu, "appears to be under water"

after Hurricane Walaka surged past the state, the Papahānaumokuākea Marine National Monument said in a Tuesday statement.

The island has played a key role in the survival of beleaguered seals and sea turtles, said the officials, who are "working to better understand the implications" of the island's sunken status.

"There's no doubt that it was the most important single islet for sea turtle nesting," Charles Littnan, a biologist with the National Oceanic and Atmospheric Administration, told the Honolulu Civil Beat, which first reported the island's disappearance.

The 11-acre isle acted as nesting grounds for half the world's Hawaiian green sea turtles, the Civil Beat reported. It served as the birthplace for roughly one-seventh of all Hawaiian monk seals.

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### Chip Fletcher: Memorial for a 2,171-year-old island

Posted on November 26, 2018 by Marcie Grabowski

Video credit: Chip Fletcher and Honolulu Civil Beat.

The recent loss of East Island in the Papahānaumokuākea Marine National Monument to rising sea level demonstrates the need to stop climate change. Now.

Chip Fletcher, earth sciences professor and associate dean in SOEST, published a video op-ed in the Honolulu Civil Beat.

Watch the video here.

shocked by Quicken Loans

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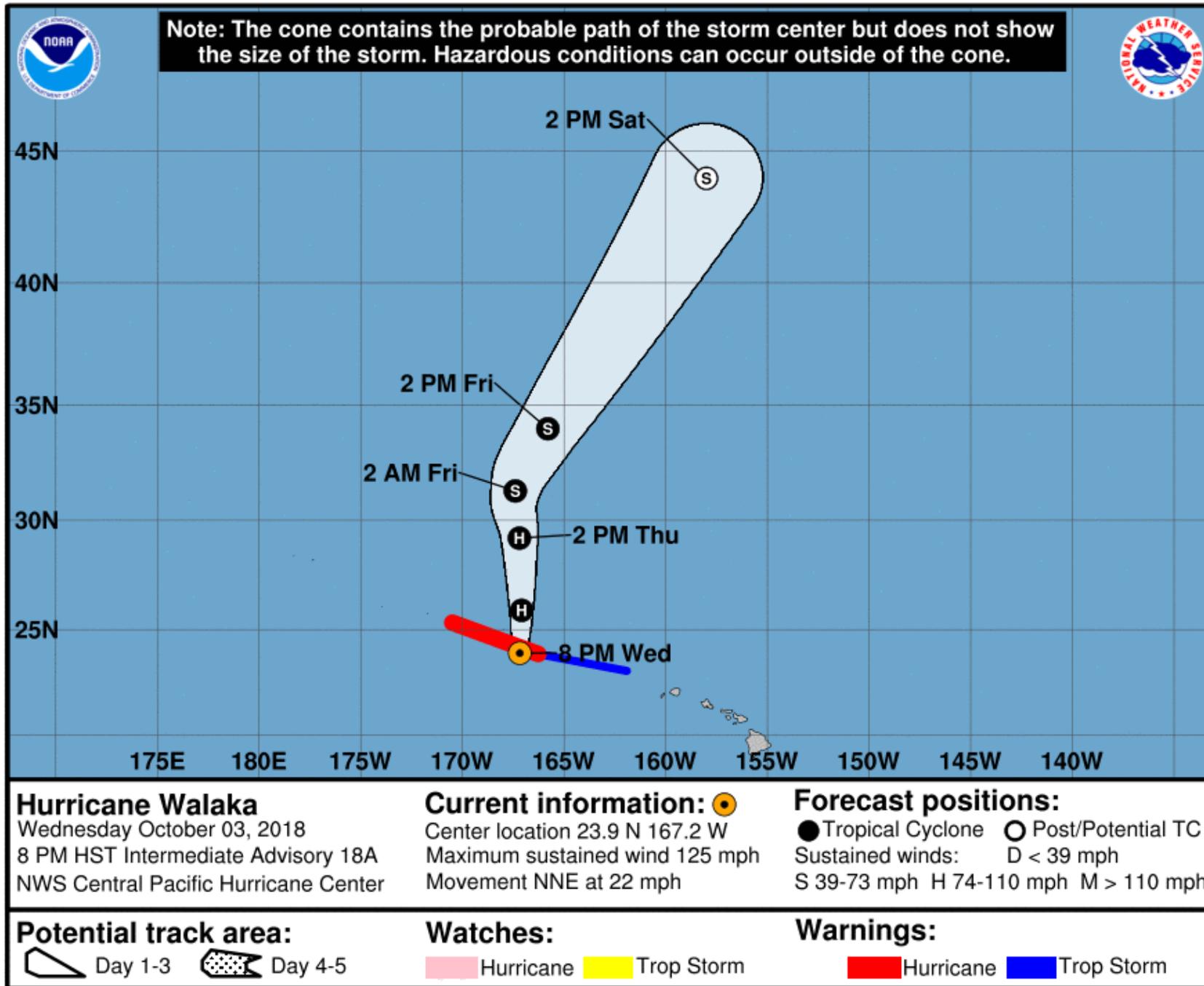
When it was mostly gone.

swept through the central Pacific this year, captured in images as an 11-acre sliver of sand on the turquoise ocean.

Government officials confirmed that the island, in the Hawaiian archipelago, had been largely wiped out, said Athline Clark of the National Oceanic and Atmospheric Administration. East Island is the second island to disappear in recent months from French Frigate Shoals, a crescent-shaped island containing many islets, Ms. Clark said.

Chip Fletcher, a climate scientist with the University of Hawaii who is studying East Island's natural history, said it comprises loose coral rubble and gravel rather than solid rock. His team had just taken samples from the island in July. But late last week, he said, he was alerted by government officials that it had mostly disappeared.

# Walaka



# Walaka vs. East Island

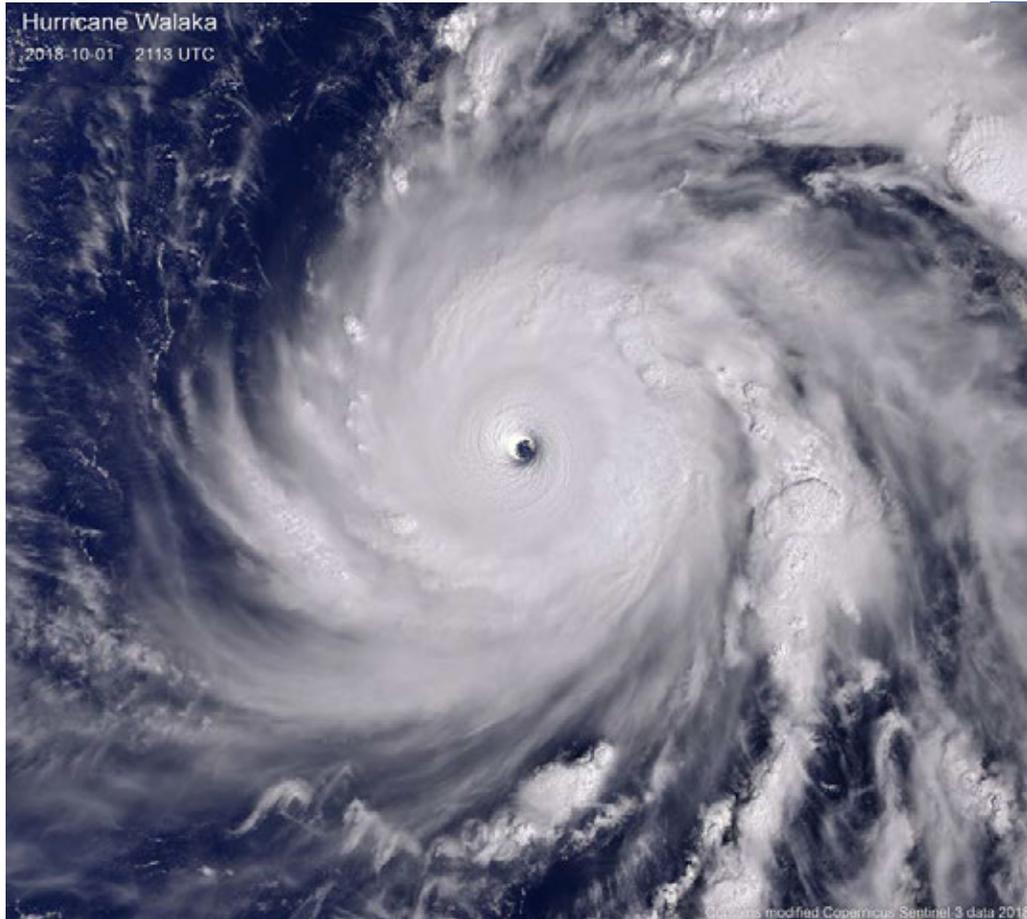
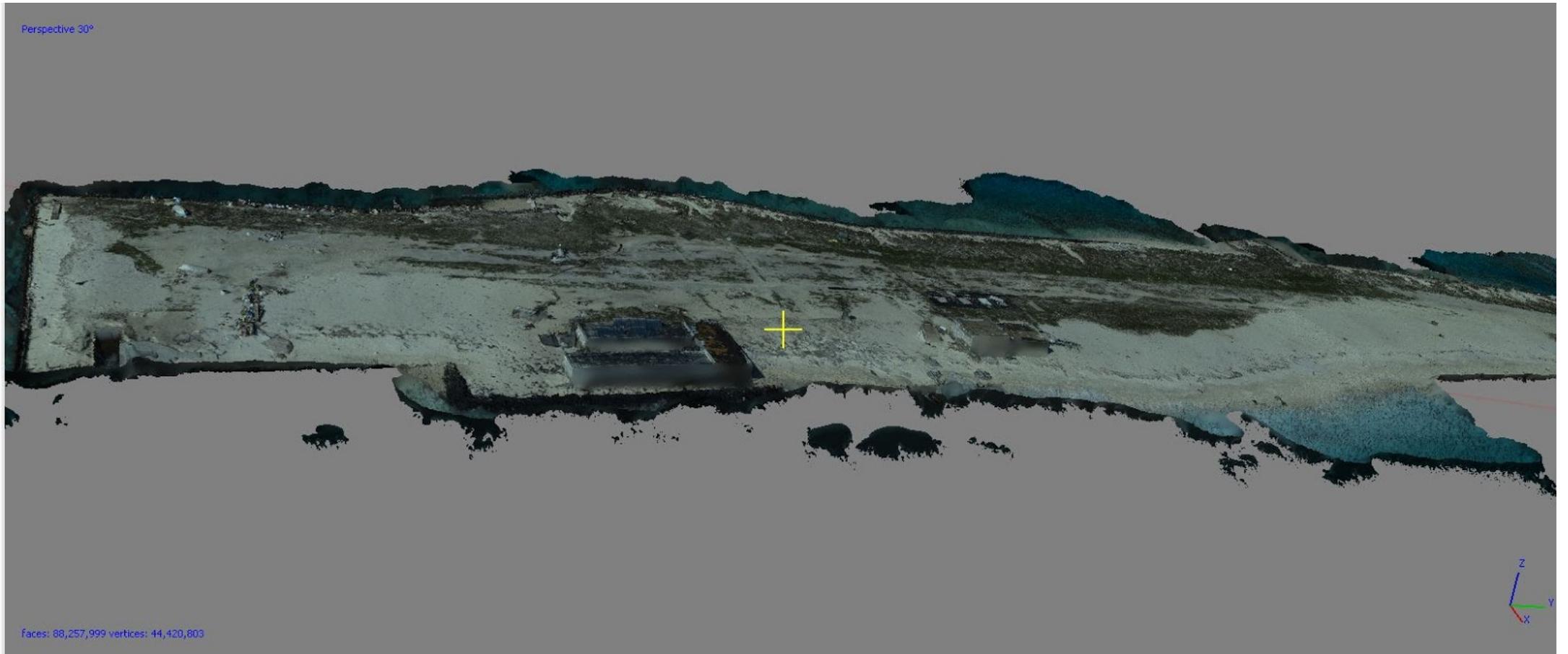


Photo: Left, NOAA. Right, Civil Beat



Perspective 30°



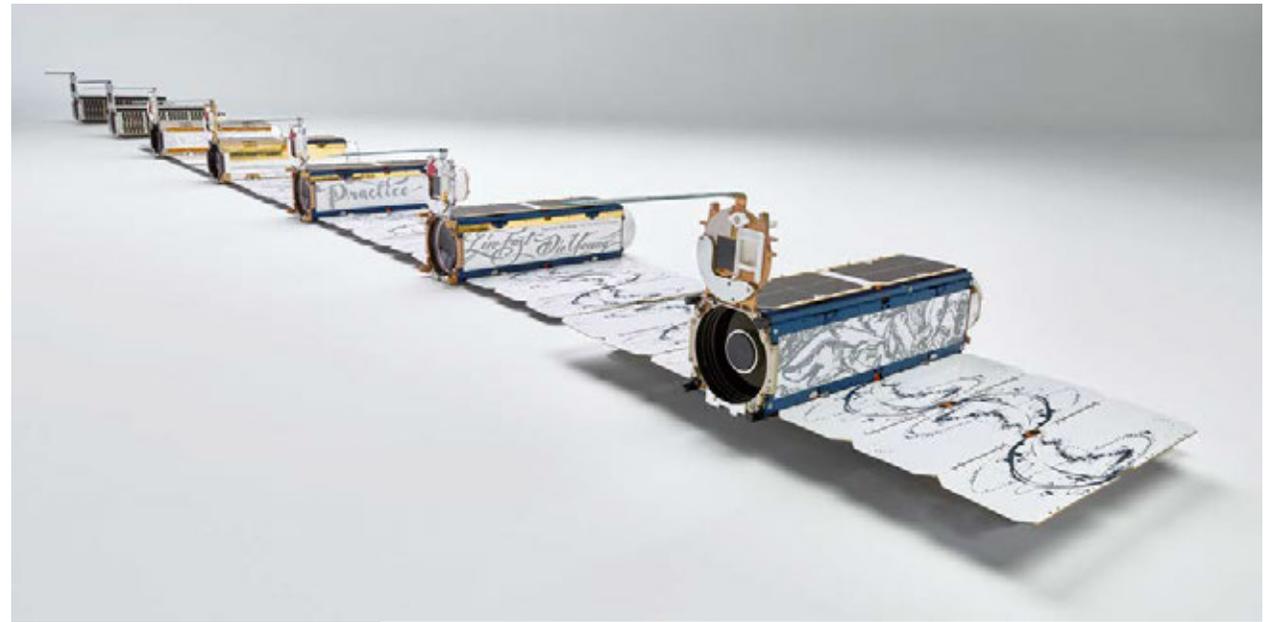
faces: 88,257,999 vertices: 44,420,803



Resolution: 3.7 m<sup>2</sup>

## Time Series

- Sept 25, 2018 (Prior to Walaka)
- Oct 13, 2018
- Dec 13, 2018
- Jan 09, 2019
- Feb 22, 2019
- April 01, 2019



Photos: Planet Labs

# Results

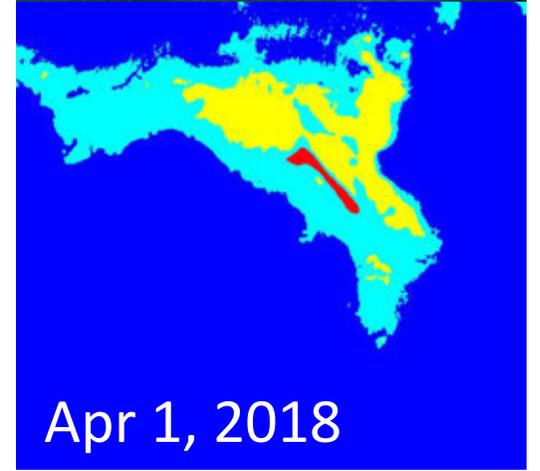
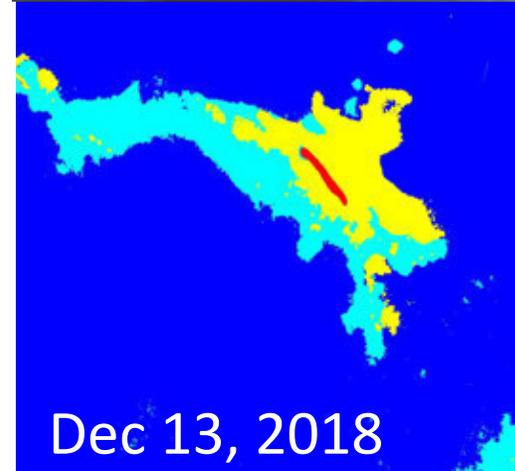
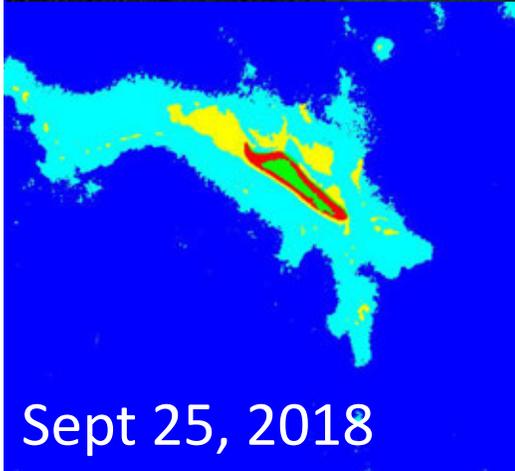
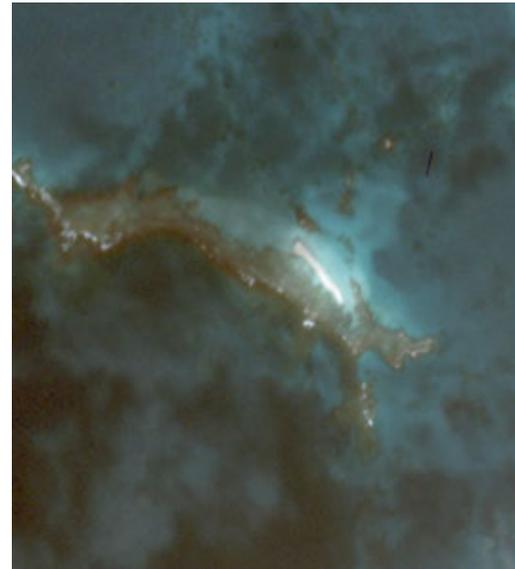
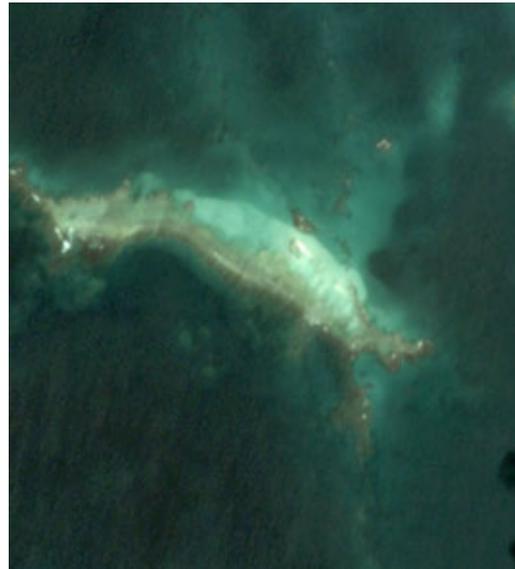
Water

Vegetation

Sand

Shallow Sand

Shallow Reef



Sept 25, 2018

Oct 13, 2018

Dec 13, 2018

Apr 1, 2018



# QUESTIONS?

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