

# Water Quality, Microplastics and Pa‘akai

WORLD INDIGENOUS NATIONS UNIVERSITY – HAWAI‘I PASIFIKA

# What is in our Pa‘akai?

- Test Ocean Water
  - E. Coli and Coliform bacteria
- Examine Gathered Salt
  - Microplastics
- Observations
  - Ocean Current
  - Debris

# Collaboration with Innovations Public Charter School



7<sup>th</sup>/8<sup>th</sup> Grade Mentorship Students and 3<sup>rd</sup>/4<sup>th</sup> grade field trip

# Test Ocean Water

- E. coli and Coliform – Raw Sewage
- 5 Separate Collections
  - 2/7/20
  - 2/14/20
  - 2/20/20
  - 3/5/20
  - 3/13/20
- All 36 samples collected within 10 feet of shoreline



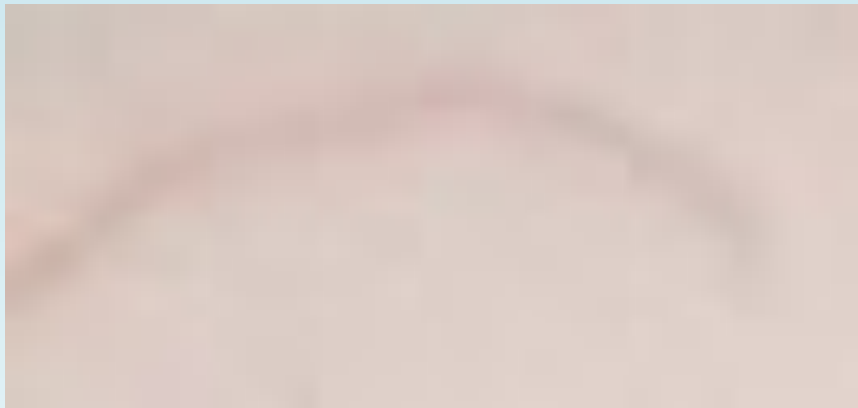
No presence of E. coli and Coliform

# Examine Gathered Salt

- Microplastics
- 1 Collection
  - 2/20/20
  - 7.1 Ounces Dried
- Plastics React to Heat



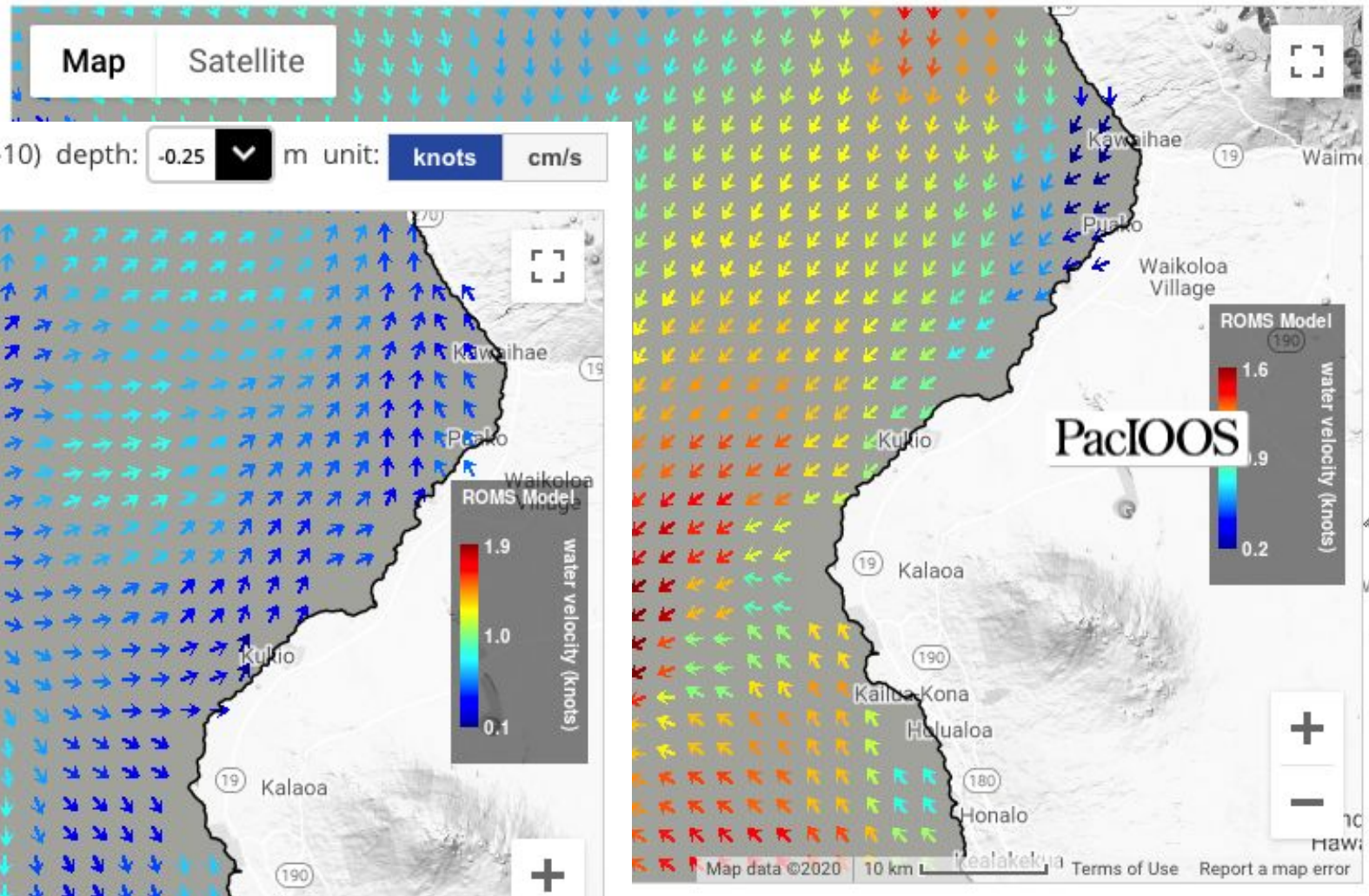
Presence of microplastics



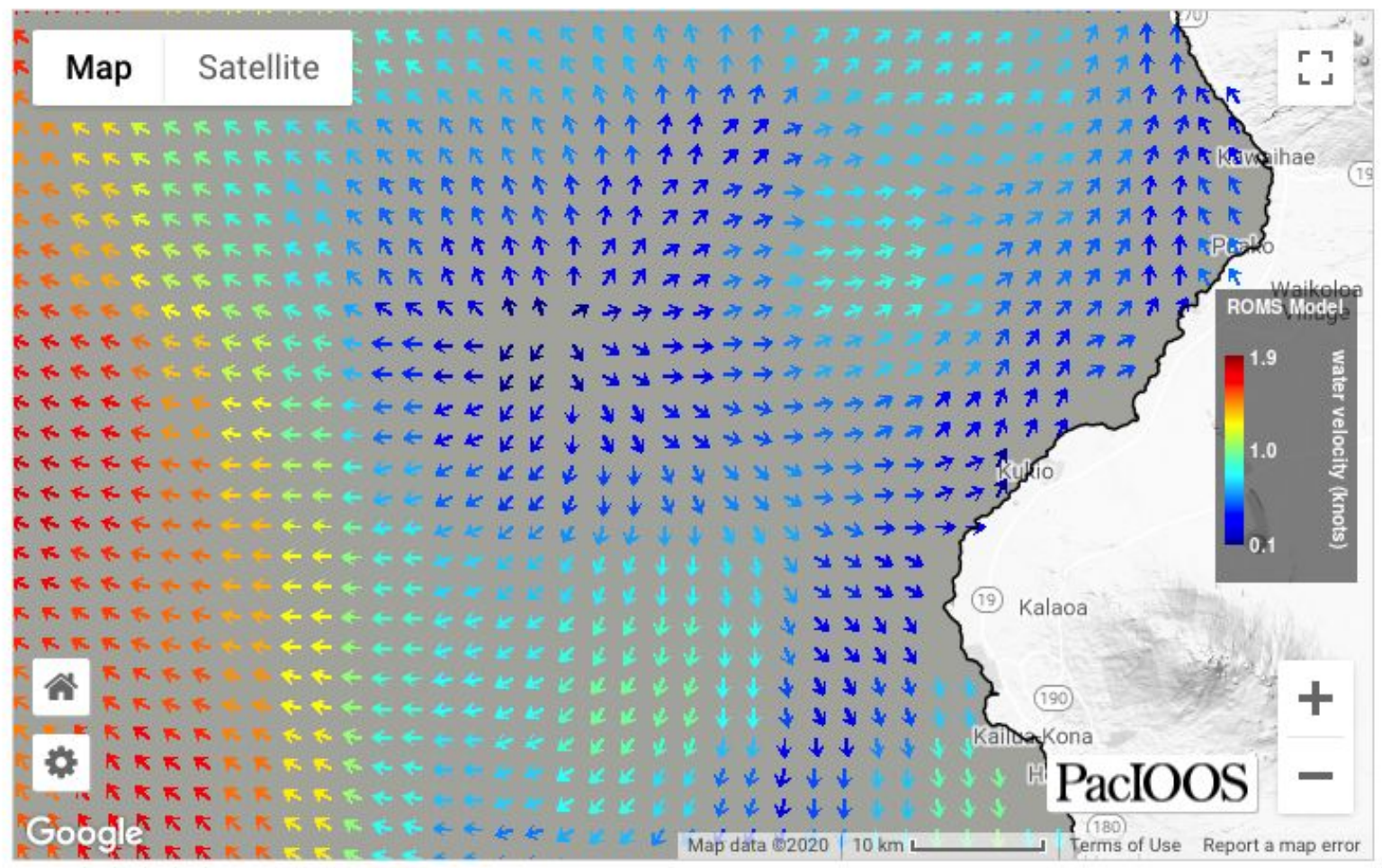
# Observations

- Ocean Currents

date: Fri Feb 7, 2020  time: 11:00 AM  HST (UTC-10) depth: -0.25  m unit: **knots**  cm/s



date: Fri Feb 14, 2020  time: 11:00 AM  HST (UTC-10) depth: -0.25  m unit: **knots**  cm/s



# Observations

- Debris



# Summary - What is in our Pa‘akai?

- Test Ocean Water
  - E. Coli and Coliform bacteria - No
- Examine Gathered Salt
  - Microplastics - **Yes**
- Observations
  - Ocean Currents – Frequent Changes
  - Debris – Plastics, Metals, Glass, Batteries





Questions?