



Hawaiian Islands Humpback Whale National Marine Sanctuary

NON-GOVERNMENT (Voting)

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GOVERNMENT (Non-Voting)

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DBEDT Science and Technology

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Malia Chow PhD
Sanctuary Superintendent
Hawaiian Islands Humpback Whale National Marine Sanctuary
NOAA Office of National Marine Sanctuaries
6600 Kalaniana'ole Hwy STE 301
Honolulu, HI 96825

RE: Towed Aquapod Array Technology

Dear Malia,

The Hawaiian Islands Humpback Whale National Marine Sanctuary Advisory Council (SAC) recommend that NOAA Fisheries and Kona Blue Water Farms (KBWF) take a precautionary approach¹ when developing/testing/implementing this new Towed Aquapod Array technology. The area that KBWF targets for their aquaculture activity is known by local mariners to be a treacherous area with winds in excess of 35 knots, swells over 15 feet, and currents over 3 knots. It is not unusual to have cross-swells coming from two directions causing harmonic waves in excess of 20 feet. Towing 10's, if not 100's, of tons of material with a sailing vessel is complex. The committees recommend that KBWF perform sailing and marine engineering modeling of the impacts of weather and current conditions upon their vessel, Aquapods, gear, and crew.

To further implement a precautionary approach, the SAC recommends the following specific actions:

Third-party research and data collection (e.g. NOAA observer program) should take place aboard the *S/V Machias* to provide information on the effects, if any, to the surrounding aquatic ecosystems and their inhabitants. Research and data collection should include an assessment of the ecosystem prior to deployment of the Towed Aquapod Array to provide baseline data, then periodic assessment during the deployment, and finally a post-project assessment of the ecosystem. Upon completion of data collection, monitoring information should be readily available to the public.

Additionally the SAC recommend that KBWF, in light of recent complications with the array, provide a 90 day "at sea" trial for the vessel and single empty Aquapod in tow in an area with moderate winds and currents. Only after successful sea trial in moderate winds and currents, should KBWF attempt a sea trial in its target location beyond ten miles offshore. Additionally, a test period should be performed during the time of year when the most extreme conditions (currents/winds/swell) will occur to test maximum limits of the vessel and array. Only when these successive sea trials can be performed without failure should KBWF be permitted to introduce live fish into the Aquapods.

Mahalo Nui Loa

Adam A. Pack, Ph.D
Chair, Hawaiian Islands Humpback Whale
National Marine Sanctuary Advisory Council

¹The **precautionary principle** or precautionary approach states that if an action or policy has a suspected risk of causing harm to the public or to the environment, in the absence of scientific consensus that the action or policy is harmful, the burden of proof that it is not harmful falls on those taking the action

"The council is an advisory body to the sanctuary superintendent. The opinions and findings of this letter/publication do not necessarily reflect the position of the sanctuary and the National Oceanic and Atmospheric Administration."