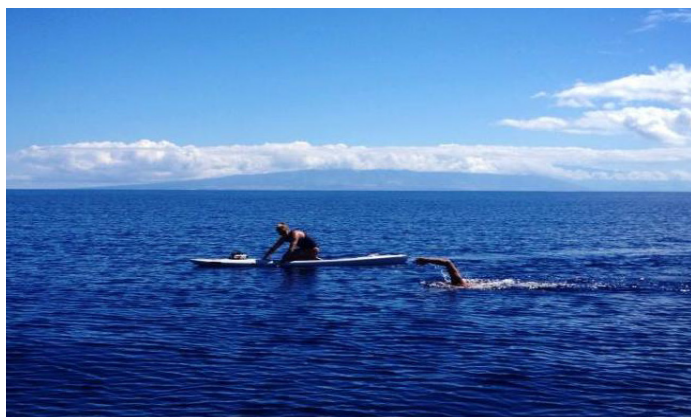




## *Making the Dream Come True: 18.6 Mile Channel Swim from Molokaʻi to Lānaʻi and Back*

With an almost-full moon glowing overhead, Billy Brown glided into the glassy waters off Kaunakakai, Molokaʻi at 3:30 a.m. on October 18, 2013, and commenced an aquatic journey amid calm waters. The journey was a dream of Billy's: to be the first person to complete the longest double channel swim in Hawaiian history - swimming across Kalohi Channel from Molokaʻi to Lānaʻi, and back to Molokaʻi. 18.6 miles. The environmental conditions were perfect that day: minimal winds, falling tide, soft currents, and good light from the moon. Luck? Maybe a little. Planning and research also played a large role in making sure Billy charged into this channel swim at just the right moment.



Billy Brown crosses the Kalohi Channel twice. With the support of his crew and PacIOOS forecasts, calm ocean conditions awaited Billy and made the swim a full success. (Photo Credit: Lauren Griswold)

Flash back to 2003, during Billy's first channel swim, when he learned the hard way about the importance of such planning and research. He and his colleagues were to swim across the Palilolo Channel, from Maui to Molokaʻi. In the morning of the swim, the winds were gusting up to 40 knots, and the support boat captain would not accompany them.

So they quickly changed plans and crossed the 'Auʻau Channel (Maui to Lānaʻi) in slightly better conditions: 30-knot winds and 6-8 foot open ocean swells. They made it to Lānaʻi, but it was not pleasant or enjoyable for anyone involved.

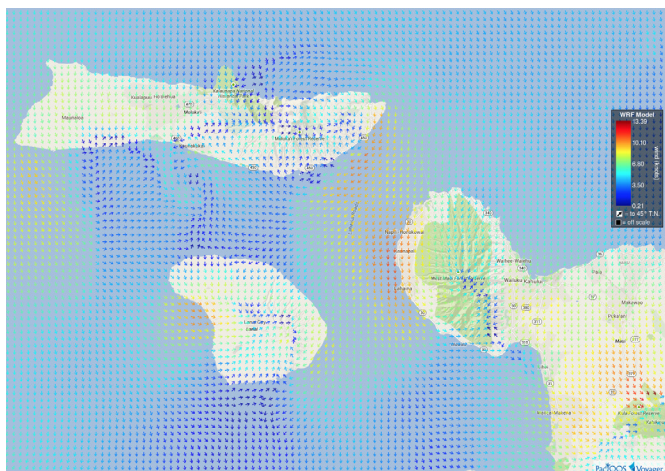
In subsequent years, Billy got smarter. He started consulting tide charts and watching weather forecasts on the local news. He successfully completed several more channel swims, including the reverse 'Auʻau (Lānaʻi to Maui) and the Palilolo (Maui to Molokaʻi).

When Billy's greatest support, his grandmother, died on Maui in 2013, he decided that he needed to finish the Maui-Lānaʻi-Molokaʻi triangle. He wanted to try a double channel crossing, so he set his sights high on the double Kalohi. For this 18.6 mile journey, he knew the conditions could make or break his swim. So he added a new tool, the Pacific Islands Ocean Observing System (PacIOOS), to the roster of his support crew. He used the PacIOOS Voyager, an interactive data visualization tool, to examine forecasts for tides, winds, and currents.



In loving memory of Billy's greatest supporter, he dedicated the double channel crossing to his grandmother. (Photo Credit: Lauren Griswold)

## Making the Dream Come True: 18.6 Mile Channel Swim from Moloka'i to Lāna'i and Back (Continued)



Using PacIOOS Voyager, the Weather Research and Forecasting Model predicted calm winds between Moloka'i and Lāna'i (blue arrows indicate winds of 5 knots or less for October 18, 2013).

### Waiting on the winds

Billy got to training and talked to the captain of his support boat, who tossed out a date in October - as a long shot. Based on weather forecasts and conditions, it was obvious well in advance that this date was going to be too windy, so they pushed it back. As the calendar approached the second date planned, another popular website specialized in forecasting weather conditions for ocean users was predicting favorable 5-10 knot winds, but the PacIOOS Weather Research and Forecasting (WRF) Model was anticipating 20 knots. The next day, the popular weather forecasting website agreed with PacIOOS' forecast. So they postponed the trip again, even though it meant the loss of some of Billy's support crew, due to scheduling conflicts. Billy's confidence in the PacIOOS forecast grew each day as he compared it with other sites and what he was seeing on the ground at home in Kaua'i. The team went into a holding pattern - waiting for the PacIOOS WRF to predict favorable wind conditions. All crew would have 48 hours notice to prepare.

On October 14, 2013, the PacIOOS WRF predicted a major drop in winds for October 18, so the crew was notified and everyone got over to Moloka'i.

### Swim of a Lifetime

At the beginning of sunrise, as "mother ocean was unveiling its curtain," Billy saw a large striped marlin swimming below him. For the next hour, the great fish circled and followed him. At one point, the marlin turned blue (indicating that it was excited or agitated), jumped up in the air between Billy and the boat, landed, and swam away.

On the way back to Moloka'i, the winds stopped. It was a great way to finish off this momentous swim for Billy. "I hammered it out. I felt good from beginning to end, because I was swimming in perfect conditions, and I knew I just nailed it."

Touching the south shore of Moloka'i 10 hours and 26 minutes after he had started the swim, Billy was the first person to complete the double Kalohi Channel swim. He felt great, and he knew his grandmother would be proud.

*"Previous channel swims were scary. I looked at the weather on the TV, but I had no idea was I was getting into. This time, I did my research beforehand with PacIOOS forecasts, and it really paid off. PacIOOS was part of my team that made this swim happen. Thank you! Your data and information were extremely valuable in my decision-making process to plan my swim so that I could fully succeed in this channel. Your data were accurate and helped me determine when exactly to swim*

*...and I picked the right time!"*

*-- Billy Brown*

For more information on PacIOOS modeling, including ROMS, Wave Models, WRF Atmospheric Model and Model Forecasts, please visit:

<http://pacioos.org/focus/modeling>

To check out PacIOOS Voyager, an interactive map interface visualizing oceanographic observations, forecasts, and other geospatial data and information related to the marine environment, please visit:

<http://pacioos.org/voyager>

E-mail PacIOOS at [info@pacioos.org](mailto:info@pacioos.org) about your ocean observing needs or if you have any questions.