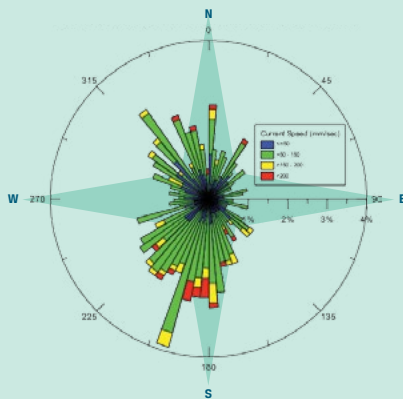


Monitoring our coast

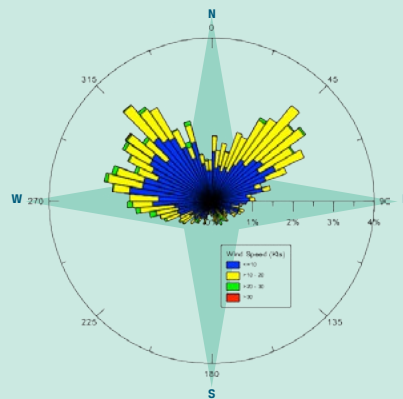
Monitoring our coastal water quality - The HAWQI Buoy

Our HAWQI buoy showed that the strongest currents move in a south to south-west direction.



Current speed (mm/sec) and direction

Our Airmar weather station at HAWQI showed that strongest winds come from the north-west and north-east.



Wind speed (knots) and direction



Pictured above is our coastal water quality monitoring buoy known as HAWQI (Hawke's Bay Water Quality Information), located off the coast of Whirinaki, north of Napier. HAWQI collects data about water temperature, salinity, clarity and weather information in the nearshore marine environment. It takes 41 different measurements after every 15 mins.



Water Quality Monitoring sites

How do we measure coastal water quality?

Water Quality - Coastal water quality tells us how the ocean is working, and how it may be processing the water that comes down from the rivers and streams. High levels of sediment and nutrients can cause problems for our coastal waters.

Nutrients - Nutrients such as nitrogen and phosphorus can make their way into our coastal waters from the land via rivers and streams. These can encourage the growth of phytoplankton (small plants in the water), and cause changes in the types of plankton present, and the dissolved oxygen levels in the water.

Bacteria - In coastal water the bacteria enterococci is measured to provide information on whether other pathogens (viral and bacterial) are likely to be present.

State of the Environment Report Card 2017

Understanding our coastal waters

In 2017 HBRC started investigating the linkage between land and sea in Hawke's Bay to meet one of the key research needs identified by the Marine and Coastal Group Roadmap. Information will be collected on the movement of the marine waters of Hawke's Bay and how the water carries contaminants and sediments around the bay. In turn this information will help us understand how our activities on the land and in the freshwater environment impact on the marine environment. This is a complex project that will draw together many different information sources to complete. Watch this space in 2018.



QUICK FACTS

The highest coastal water temperature in 2017 was

22.4 degrees C

HBRC measures nearshore water quality sites every six weeks

16

Highest wind gust recorded at HAWQI was

88.7 km/hr

New arrival helps to uncover what's underwater

State of the Environment Case Study

Hawke's Bay Regional Council coastal and marine scientists are getting a clearer picture of what is going on deep down underwater on our coast - thanks to a new arrival. 'Big Blue' is a remote-operated vehicle (ROV) capable of diving down to 100 metres and filming the underwater environment.

Hawke's Bay Regional Council Coastal Quality Senior Scientist Anna Madarasz-Smith says the Council bought the ROV to help map the region's sub-tidal habitats. Much of Regional Council's work over the next few years will be focused on describing the different types of habitats that the region has beneath the waves. The ROV has so far been deployed at sites along the Wairoa Hard to describe the type of sediment in this area, and will be used to explore areas of interest to help build a better picture of some of our seafloor features.

"Big Blue allows us to see what we can't from the land or the surface of the water. We can see what the seafloor is like and what algae and marine life exist down there," says Ms Madarasz-Smith. "It will give us a better understanding of what we have below the surface and what condition it's in." The ROV can potentially also be used in lakes and to inspect hulls of boats in the Council's biosecurity work.

HBRC's Anna Madarasz-Smith and Shane Gilmer with 'Big Blue'



Find out more

Hawke's Bay Regional Council monitors our land, water and air.

We use this data to inform our work with communities to improve and protect the environment.

Each year we develop a series of report cards to provide you with a snapshot of how our environment is tracking.

For more details including the full technical reports visit www.hbrc.govt.nz (search: report search)

For up to the minute monitoring results from Hawke's Bay and other parts of the country visit www.lawa.org.nz

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