

Chapter 2

Beachwatch Partnership Programs

Overview of findings

This section provides a summary of key findings from the Beachwatch Partnership Program during 2007–2008. Detailed results for each council area are provided in the following sections and supported by individual beach pages for each site.

Ballina Shire Council

Nine swimming locations were monitored in the Ballina Shire Council area between November 2007 and February 2008. Faecal coliform and enterococci samples were collected from all locations to assess compliance with NHMRC (1990) swimming water quality guidelines.

The nine swimming sites were:

- the ocean beaches of Seven Mile and Shelley
- three sites in Lake Ainsworth
- three sites in Shaws Bay, and
- The Serpentine.

One of the nine locations, Lake Ainsworth South, passed the NHMRC (1990) swimming guidelines in all four months. With the exception of Lake Ainsworth West, all other locations failed the guidelines in January 2008 owing to elevated levels of enterococci associated with heavy rainfall and flooding in the region. Shaws Bay West also failed in February 2008 due to elevated levels of enterococci. Lake Ainsworth West failed the guidelines in December 2007.

To inform the community of water quality results during the summer swimming season, Ballina Council publishes weekly 'star ratings' in *The Advocate*, and also issues regular media releases.

Richmond Valley Council

Four swimming locations were monitored in the Richmond Valley council area during summer 2007–2008. These were:

- Airforce Beach, Main Beach and Shark Bay, and
- an estuarine swimming location in the Evans River.

Faecal coliform and enterococci samples are collected from these sites throughout the year, but only data from the summer swimming season (October 2007 to April 2008) are included in this report. Compliance with the NHMRC (1990) swimming water quality guidelines was determined for all seven months of the 2007–2008 summer swimming season.

Three swimming locations passed the NHMRC (1990) guidelines in all seven months of the 2007–2008 summer swimming season. Evans River complied with swimming guidelines in six of the seven months.

Richmond Valley Council provides water quality data on their website as monthly 'star ratings'. Information is also provided to the community through media releases.

Clarence Valley Council

Eleven swimming locations were monitored in the Clarence Valley council area during summer 2007–2008. The sites were a coastal lagoon, three estuarine swimming locations (one at the mouth of the Clarence River and two in the lower reaches of the Wooli Wooli River) and seven locations on the Clarence River.

Enterococci samples were collected between November 2007 and March 2008 to assess compliance with the NHMRC (1990) swimming water quality guidelines.

The cleanest swimming sites in the Clarence Valley Council area were:

- Wooli Estuary South at the mouth of the Wooli Wooli River
- Lawrence on the Clarence River
- Iluka Bay at the mouth of the Clarence River.

These three swimming locations passed the NHMRC (1990) guidelines in all months of the 2007–2008 summer swimming season in which sufficient samples were collected to assess compliance.

Wooli Estuary North in the lower reaches of the Wooli Wooli River also had a high level of compliance, passing the swimming guidelines in four of the five months. Kolora Lake and Maclean Jetty and South Mariner (Grafton) on the Clarence River passed the guidelines in three of the five months.

Compliance was lower at Corcoran Park and Ulmarra Jetty (Grafton), which passed the swimming guidelines in only two months of the 2007–2008 summer season. Prince Street (Grafton) failed in four months and Grafton Sailing Club failed the swimming guidelines in all five months.

Clarence Valley Council has erected warning signs at sites in Grafton with low compliance. Further monitoring to identify the source of pollution at the Grafton Sailing Club has also been undertaken.

Coffs Harbour City Council

Eleven swimming locations were monitored in the Coffs Harbour City Council area between November 2007 and February 2008. The sites were two ocean beaches, one rock pool, one estuarine site, two coastal lakes and five creeks.

Enterococci samples were collected from all locations to assess compliance with NHMRC (1990) swimming water quality guidelines. Compliance was calculated only for November 2007 and January 2008 when sufficient samples were collected.

The cleanest swimming sites were:

- the ocean beaches of Emerald and Jetty
- Sawtell Rockpool

- the estuarine swimming location of Red Rock, located at the mouth of the Corindi River
- Coffs Creek.

These locations passed the swimming guidelines in both months in which compliance could be assessed.

Woolgoolga Lake, Hearn Lake, Arrawarra Creek, Moonee Creek and Boambee Creek complied with the NHMRC (1990) swimming guidelines in one of the two months.

Lowest compliance was at Bonville Creek which failed to comply with swimming guidelines in both months of the 2007–2008 summer season in which sufficient samples were collected.

Kempsey Shire Council

Ten swimming locations were monitored in the Kempsey Shire Council area between October 2007 and April 2008. The sites were:

- the ocean beaches of Grassy Head, Horseshoe Bay, Trial Bay, Hat Head and Killick
- the estuarine swimming location of Stuarts Point
- four coastal creeks (Back Creek, Killick Creek, Saltwater Creek and Korogoro Creek).

Faecal coliform samples were collected during October 2007 and November 2007 and enterococci samples were collected from November 2007 to April 2008 to assess compliance with the NHMRC (1990) swimming water quality guidelines. Compliance could not be assessed for all months at all sites because there were insufficient samples.

Five of the ten locations passed the NHMRC (1990) swimming guidelines in all months in which sufficient samples were collected to assess compliance. These sites were Grassy Head Beach, Horseshoe Bay, Trial Bay, Hat Head Beach and Killick Beach.

A relatively high level of compliance was also recorded at Stuarts Point, which passed the swimming guidelines in four of the five

months in which compliance could be assessed.

Back Creek and Killick Creek complied in two of five months and Korogoro Creek complied with the swimming guidelines in two of three months.

The lowest compliance was recorded at Saltwater Creek which was suitable for swimming in only one of the five months in which sufficient samples were collected to calculate compliance.

Kempsey Council regularly updates water quality data and star ratings information on its website, providing the community with ongoing information during the summer swimming season.

Port Stephens Council

Seven swimming locations were monitored in the Port Stephens Council area between October 2007 and April 2008. The sites were:

- Birubi Beach at the northern end of Stockton Bight
- Bagnalls Beach, Georges Reserve, Dutchmans Beach and Little Beach within Port Stephens
- Karuah Tidal Pool and Lemon Tree Passage Tidal Pool.

Faecal coliform and enterococci samples were collected from all locations to assess compliance with NHMRC (1990) swimming water quality guidelines. Compliance could not be assessed for April 2008 because there were insufficient samples.

All seven locations passed the swimming guidelines in all six months.

Port Stephens Council issued joint media releases with DECC during the summer swimming season to provide the community with information on water quality at swimming sites.

Newcastle City Council

Newcastle Council routinely tests water quality at four ocean baths: Merewether Learners, Merewether Main, Canoe Pool and Newcastle Baths. Samples are collected year-round at two sites, but only data collected over the 2007–2008 summer

swimming season are presented in this report.

All four swimming locations passed the NHMRC (1990) swimming guidelines in all months in which sufficient samples were collected to assess compliance.

Newcastle Council presents water quality results from the ocean baths at open community meetings throughout the summer season and issued joint media releases with DECC.

Wyong Shire Council

Twenty-nine swimming locations were monitored in the Wyong Shire Council area during the 2007–2008 summer swimming season. These sites included 17 ocean beaches, nine coastal lake sites and three estuarine river sites in the Tuggerah Lakes catchment.

Faecal coliform and enterococci samples were collected from all locations from October 2007 to April 2008 to assess compliance with NHMRC (1990) swimming water quality guidelines.

The cleanest swimming sites in the Wyong Shire Council area were:

- the ocean beaches of Frazer, Budgewoi, Lakes, Hargraves, Jenny Dixon, Cabbage Tree, Lighthouse, Gravelly, Soldiers, North Entrance, The Entrance, Blue Bay, Toowoona Bay, Shelly, Blue Lagoon and Bateau Bay
- Summerland Point, Gwandalan and Chain Valley Bay in Lake Macquarie
- Toukley Aquatic in Lake Budgewoi
- The Entrance Channel and Long Jetty in Tuggerah Lake.

These swimming sites passed the NHMRC (1990) guidelines in all seven months of the 2007–2008 swimming season.

A high level of compliance was also recorded at Birdie Beach which complied in all six months in which sufficient samples were collected. Compliance could not be assessed in April 2008 because there were insufficient samples.

Elizabeth Bay in Lake Munmorah and Canton Beach in Tuggerah Lake also recorded a high level of compliance, complying with the swimming guidelines in six of the seven months.

San Remo complied with the swimming guidelines in five of the seven months.

Tumbi Umbi Creek failed the swimming guidelines in all seven months of the 2007–2008 summer swimming season, and Ourimbah Creek and Wyong River failed in five of the seven months. Swimming at these locations should be avoided at all times.

Wyong Council has initiated a number of management actions in response to these findings: erecting warning signs at Tumbi Umbi Creek, Ourimbah Creek and several estuarine swimming locations where there has been a history of failure to meet swimming guidelines, undertaking faecal sterol testing to identify the source of contamination and conducting additional sampling around Tuggerah Lake.

Gosford City Council

Twenty-two swimming locations were monitored in the Gosford City Council area between October 2007 and April 2008.

Faecal coliform samples were routinely collected at all sites to assess compliance with NHMRC (1990) swimming water quality guidelines. Compliance could not be assessed in December because there were insufficient samples.

The following locations passed the NHMRC (1990) swimming locations in all months of the 2007–2008 summer swimming season, in which sufficient samples were collected:

- The ocean beaches of Forresters, Wamberal, Terrigal, North Avoca, Avoca, Copacabana, McMasters, Killcare, Umina and Pearl
- the lagoon sites of Wamberal and Avoca Lake
- the estuarine swimming location of Ettalong Channel
- Pretty Beach Baths, Pearl Beach Rockpool and Yattalunga Baths.

A relatively high level of compliance was also recorded at Terrigal Paddleboats, Bulbararing and Cockrone Lagoons, Woy Woy Baths and Davistown Baths which complied in five of six months, and at Terrigal Sailboards which complied in four of six months.

Gosford Council provides water quality information to the community on its website.

Shoalhaven City Council

Ten sites were monitored in the Shoalhaven City Council area. The sites were:

- the ocean beaches of Shoalhaven Heads, Tilbury Cove, Warrain, Collingwood, Cudmirrah, Mollymook, Rennies, Racecourse, Bawley and Merry.

Faecal coliform and enterococci samples were collected from all locations between December 2007 and February 2008 to assess compliance with NHMRC (1990) swimming water quality guidelines.

All of the ten locations passed the swimming guidelines in all three months of the 2007–2008 summer swimming season.

Shoalhaven City Council issued joint media releases with DECC during the summer swimming season to provide the community with information on water quality at swimming sites. Information is also provided on the Council's website.

Eurobodalla Shire Council

Eleven swimming locations were monitored in the Eurobodalla council area during the 2007–2008 summer swimming season. The sites were:

- Cookies, Casey, Surf, Malua Bay, Broulee, Bengello, Shelley, Tuross, Brou and Narooma ocean beaches
- Wagonga Inlet netted beach.

Faecal coliform and enterococci samples were collected between October 2007 and April 2008 to assess compliance with the NHMRC (1990) swimming water quality guidelines.

Ten of the 11 locations complied with the NHMRC (1990) guidelines in all seven

months of the 2007–2008 summer swimming season. These sites were Cookies Beach, Casey Beach, Malua Bay Beach, Broulee Beach, Bengello Beach, Shelley Beach, Tuross Main Beach, Brou Beach, Narooma Main Beach and Wagonga Inlet.

A high level of compliance was also recorded at Surf Beach which passed the NHMRC (1990) guidelines in six of the seven months. This site failed the swimming guidelines in November 2007 owing to elevated levels of enterococci.

Eurobodalla Council issued joint media releases with DECC during the summer swimming season to provide the community with information on water quality at swimming sites.

Bega Valley Shire Council

Twenty swimming locations were monitored in the Bega Valley Shire Council area in December 2007 and January 2008.

The sites were:

- the ocean beaches of Camel Rock, Horseshoe Bay, Beares Beach, Tathra Beach, Short Point, Merimbula, Pambula, Aslings and Cocora
- Wallaga Lake (bridge), Mogareeka Lions Park, Mogareeka Boat Ramp, Spencer Park, Mitchies Jetty, Bar Beach, Pambula River Mouth, Cuttagee Inlet and Back Lake
- Bruce Steer Pool and Big Blue Pool.

Faecal coliform samples were collected at all locations to assess compliance with NHMRC (1990) swimming water quality guidelines. Compliance was assessed only in January 2008 because there were insufficient samples in December 2007. All 20 swimming locations passed the NHMRC (1990) swimming guidelines in this month.

Bega Valley Council issued joint media releases with DECC during the summer swimming season to provide the community with information on water quality at swimming sites.

Response to rainfall

Although monitoring during the 2007–2008 swimming season focused on the assessment of guideline compliance, bacterial results were also plotted with rainfall and, where possible, an assessment of the impact of rainfall on recreational water quality was made. These trends are discussed on the individual beach pages and on the council summary pages.

Slightly elevated bacterial levels (values above median and geometric mean guideline limits) were measured at many swimming locations following heavy rainfall. However, these results were not necessarily indicative of sewage contamination (which for practical purposes is sometimes taken to be indicated by faecal coliform or enterococci levels of 1000 cfu/100 mL or more).

In contrast to the four previous summer seasons, some council areas recorded large or extended wet weather events during the 2007–2008 swimming season, particularly in northern New South Wales. Heavy rainfall in January 2008 resulted in extensive flooding along the Tweed and Richmond Rivers. Floodwater from these events affected water quality at many sites, including ocean beaches.

Bacterial levels at estuarine and coastal lake swimming locations showed a greater response to rainfall than the ocean beaches. Elevated levels of indicator bacteria were measured during and after rainfall at many locations, indicating varying degrees of sewage contamination. As a precaution, it is recommended that swimming be avoided during, and for at least 24 hours after, rainfall at ocean beaches and up to three days in estuaries and coastal lakes.