

- [Environment](#)
- [Sustainability](#)
- [Indigenous](#)

# South Australia's disappearing springs raise questions for miner BHP



By [Richard Baker](#)

November 23, 2020 — 11.30pm

Dotted around the vast arid harshness of outback South Australia are thousands of small springs fed by ancient waters from the Great Artesian Basin.

Few in big cities know about the "mound springs", but they are of deep cultural significance for the Arabana people who hold native title over Lake Eyre and its surrounds. They are also a precious source of life for humans, animals and plants in a hostile environment.



A mound spring near the shore of Lake Eyre in South Australia.

But the Arabana people fear the extraction of tens of millions of litres of water from the basin each day by mining, petroleum and pastoral industries threatens the existence of the springs by reducing flow pressure in the aquifer to the extent that the springs dry up.

The [federal parliamentary inquiry](#) into Rio Tinto's destruction in May of 46,000-year-old rock shelters at the Juukan Gorge in Western Australia has given the Arabana people the chance to put the fate of the springs on the national agenda.

"In our country there are over 6000 of these springs and they are of great significance to the Arabana people," said the chair of the Arabana registered native title body, Brenda Underwood, in a submission to the inquiry.

"The springs themselves can be as small as a cup or large enough that you could swim in them, however, we don't because of the stories associated with them. To us, and to many Australians, they are a beautiful sight in a harsh environment.

"Unfortunately, our springs are disappearing. How many have disappeared, we are not yet sure, but we are undertaking some research to find out just how many have actually disappeared."

Rio Tinto's blasting at Juukan Gorge drew widespread public criticism, prompted the resignation of its chief executive and put a spotlight on state and federal laws that are meant to balance the protection of Indigenous heritage against the commercial interests of miners.

In the case of the springs, another mining giant, BHP, is playing a central role. BHP is licensed by the South Australian government to extract the equivalent of up to 42 million litres of water per day from the Great Artesian Basin to operate the massive Olympic Dam copper, gold and uranium mine near Roxby Downs.

Millions of litres of water are also taken from the basin each day by pastoral stations and various petroleum companies, and more is lost through evaporation from thousands of disused bores that have not been properly capped.



Boopechie Springs, Finnis Springs Station.

RMIT environmental engineering expert Gavin Mudd has studied the mound springs closely for more than 20 years and said there was no doubt the extraction of so much groundwater had contributed to a reduction in flow pressure. Some had dried up entirely.

Although the Arabana submission to the inquiry acknowledges water users such as pastoralists and petroleum companies, it largely focuses on BHP's water use and the unique South Australian laws that grant it a virtually unchallenged right to groundwater.

Under the 1982 Roxby Downs Indenture Act, the original Olympic Dam owner Western Mining and present owner BHP are afforded special privileges that trump Aboriginal heritage laws and almost all other state laws and regulations.

"Each day they [BHP] take 35 million litres of water from our springs and the Great Artesian Basin and now they wish to increase that amount to 42 million litres per day," Ms Underwood's statement said.



BHP's Olympic Dam mine.

"We are told that this will continue for at least the next 60 years. Given the number of springs that have disappeared, in 60 years we have a great fear that there will be none left whatsoever. The Arabana people have tasked me and the board of directors of the corporation to protect the springs. The big question is how?"

Ms Underwood and the 1000-strong Arabana community fear the South Australian government will be reluctant to change the status quo for BHP.

The mining company's recent announcement to pause a planned \$3 billion expansion of Olympic Dam is likely to see its water take remain about the mid 30 million litres per day mark.

The Arabana people have asked their Adelaide lawyer, Stephen Kenny, to advise them if the Commonwealth can get involved. Mr Kenny has said the Commonwealth could act to protect the springs, but previous cases such as that involving South Australia's Hindmarsh Island suggested it would not.

BHP takes its water from two wellfields called A and B. Ms Underwood told *The Age* and *The Sydney Morning Herald* that some springs associated with wellfield A were no longer flowing, while others had reduced flow. This has had a detrimental effect on flora and fauna, she said. Ms Underwood said BHP began holding talks with Arabana leaders more than a year ago.

"The operators of Olympic Dam have never had an agreement with the Arabana people, despite taking great quantities of water from Arabana lands over the last 30 years," Ms Underwood said. "We hope that the negotiations with BHP will assist Arabana to protect our remaining mound springs."

BHP said in a statement that it already undertook considerable monitoring and public reporting, and further work had begun with the Arabana people and other traditional owners to better understand the implications of continued water drawdown.

"BHP is a longstanding participant in the Great Artesian Basin Sustainability Initiative. As part of this, Olympic Dam has delivered approximately 265 gigalitres in water savings for the basin since 1999. This represents approximately 42 megalitres per day, which exceeds Olympic Dam's daily extraction rates," the company's statement said.

Professor Mudd agreed that an intensive research and monitoring effort was required to gain a greater understanding of all the factors contributing to the decline in aquifer water pressure and the death of some springs.

But research and monitoring would only do so much, he warned, adding action would be needed at some point if the springs were to be preserved. "It's like having cancer and only monitoring it but never treating it," he said.

The Australian government regards the Great Artesian Basin as a national asset of vital importance and released a strategic management plan for it in July. It is one of the world's biggest sources of underground water and is estimated to hold enough liquid to cover Earth's land mass under half a metre of water.

Lying underneath parts of Queensland, South Australia, New South Wales and the Northern Territory, the basin's size is equivalent to one-fifth of the Australian mainland. Its water is millions of years old and is as deep as three kilometres underground.

Despite the mound springs' great age, Ms Underwood and her people believe time is running short for them.

"Unless something is done by the Commonwealth, our springs will disappear and with them will disappear the unique flora and fauna that live in and around these springs. There are many endemic and endangered species of plants, fish and birds that depend on these springs, and they too will disappear."

### **Richard Baker**

Richard Baker is a multi-award winning investigative reporter for The Age.