

Case study

How Montrose delivered a PFAS treatment solution for Sydney Water

PROJECT SUMMARY

Sydney Water is Australia's largest water utility, providing water, wastewater, recycled water and some stormwater services to more than 5.4 million people in the Greater Sydney, Blue Mountains and the Illawarra. WaterNSW operates the state's dams, capturing and storing water, and supplying it to utilities like Sydney Water for filtration and distribution.

CHALLENGE: REDUCING PFAS LEVELS AT CASCADE WATER FILTRATION PLANT

When Per- and Polyfluoroalkyl substances (PFAS) were detected in the source raw water supplying the Cascade Water Filtration Plant (WFP) in the Blue Mountains (two hours west of Sydney CBD), Sydney Water moved quickly to respond to community concerns.

While the drinking water produced at the Cascade WFP met the Australian Drinking Water Guidelines, Sydney Water investigated how it could reduce the slightly elevated levels of PFAS detected in the filtered drinking water to ensure it continued to meet the current guidelines, and proposed guidelines expected to be published in 2025.

SOLUTION: MOBILE PFAS TREATMENT SYSTEM

When PFAS was detected in mid-2024, WaterNSW isolated Medlow Dam and Greaves Creek Dam as a precautionary measure and sourced raw water from Oberon Dam, which had no PFAS detection, to supply the Cascade WFP.

While the levels of PFAS detected were low and within the drinking water guidelines, Sydney Water changed the drinking water system configuration to provide the Blue Mountains area with water mostly from another WFP and immediately began investigating opportunities for PFAS treatment.

Sydney Water contacted ECT2 (part of the Montrose Environmental Group), and what started as an introduction became a rapid collaborative effort to design and deliver a mobile PFAS treatment system at Cascade WFP.

With an unwavering commitment to respond rapidly, the ECT2 team began the design, procurement, and fabrication process for the mobile PFAS treatment system. The team worked 12-hour shifts, seven days a week, to bring the system online. ECT2's General Manager, along with key members of the Australian team, relocated to the project site on a full-time basis to ensure that the project's delivery remained on track. Site mobilization occurred in late November 2024 and the mobile treatment system was operational in January 2025.

It wasn't just the technology that made this project a success - it was the people behind it. With engineering expertise spanning from Australia to the U.S., the global Montrose team operated as a seamless 24-hour machine, solving challenges overnight in the U.S. so that solutions could be implemented on-site the next day. The significant technical, operational, and project management support provided by Sydney Water to guide the design and integration of the mobile PFAS treatment system with the existing WFP, made the delivery of the project successful. Sydney Water retained ECT2 to provide operations for up to 12 months.

IMPACT: A TRUSTED PARTNER

Since going online in January 2025, the new system has treated approximately 6 million litres of water per day. The drinking water supplied to Sydney Water's customers remains safe and meets the current 2025 updated Australian Drinking Water Guidelines.

This project has cemented Montrose's place as a trusted partner and PFAS expert for water utilities across Australia. This project is a testament to what happens when passionate and dedicated people come together to address a client's needs.



KEY STATS

6 M
Liters

of water treated
daily by the mobile
treatment solution

FAST
Approval

of contracts
enabling an
efficient response

24/7
Teamwork

between U.S.
and Australian
engineers

