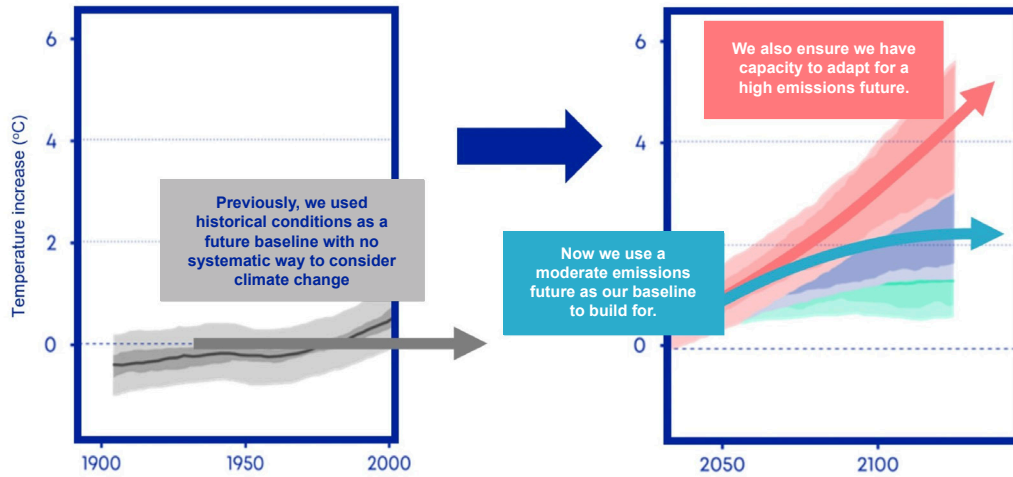


Climate Change Adaptation

Sydney Water has adopted a position to plan and invest prudently, to ensure that we can maintain service levels by managing climate risks. It sets a standard requirement to adapt to a moderate emissions pathway to build resilience for plausible futures without over-capitalising. The position applies to managing the impact climate has on customers, people, processes, assets, and systems.



Our key principles for climate change adaptation

- Embedding** climate risk management into all key business processes.
- Adapting** to a future with moderate emission projection (RCP 4.5).
- Demonstrate** adaptive pathways to a higher emissions scenario.
- Quantify** the impact of climate change on our water demand in different sectors to ensure water security.

The challenge - What are our climate hazards?

It is anticipated that climate change will increase the frequency and severity of natural hazards across our region. We recognise the need to adapt to extreme weather events and ongoing changes in climate patterns. Some of the hazards we face include:

- Bushfires** - Bushfires can cause damage our assets, block access, compromise staff safety and lead to issues in water supply.
- Heat** - Heat extremes and heat waves can interrupt power supplies, causing equipment to overheat and can create outages of service at times of high demand.
- Storms** - Storms bring damaging hail, winds and lightning which can affect our assets. These can result in direct damage to our assets, or affect services we rely on such as power and telecommunications.
- Intense rainfall** - Heavy rainfall and flooding increases our risk of asset failure, sewer overflows, and impedes our ability to treat raw water supplies.
- Sea Level Rise** - Sea Level Rise can affect our low-lying and coastal assets including wastewater treatment plants, pumping stations and stormwater channels.
- Drought** - Lengthy periods of below-average rainfall can put pressure on the water supply network.

How are we impacted by climate hazards?

- **Impact on infrastructure** - Climate hazards can damage and place stress on our critical assets. These impacts can cause our systems to shut down and require time and resources to repair and bring assets back on-line.
- **Impact on operations** - Climate hazards can pose a risk to staff safety or block access to our assets. Extreme events can also redirect people and resources away from other priorities leading to impacts down the road.
- **Impact on customers and the environment** - Climate hazards can lead to service disruptions like water outages or wastewater overflows that have a direct impact on customers, waterways and beaches. Times of drought can also affect customer water usage.

How are we building our climate change risk maturity?

We are building our risk maturity to readily adapt to the changing climate. We are investing now to ensure we are prepared for future conditions, in line with our customer values by:



Enhancing our climate risk management

The impacts of extreme weather and climate have always affected Sydney Water's services and we have developed controls over time to manage them. However, the changing climate means that events are likely to happen more frequently and at a greater intensity. Our controls will need to change in response to the changing climate.



Building our understanding

Being informed of climate risks, climate projections, and adaptation measures allows us to influence long-term decisions for the benefit of our customers and community. We use industry-leading climate models to project future climate changes and inform decision-making on our infrastructure and organisational readiness for climate change.



Embedding climate considerations into key decision making

To ensure climate change adaptation is continually considered, we have embedded governance frameworks to monitor climate risk into critical decision points of day-to-day business, supported by a strong culture of climate preparedness.



Improving our collaboration

We are taking steps to improve our networks and procedures to work better with our regulators, partners, and stakeholders. For example, we have worked alongside WaterNSW and DCCEEW to create a Drought Response Plan to best manage our shared systems, processes, and assets, optimising our efforts to combat drought.

Where are we now?

- We are committed to improving our climate change risk maturity in line with the AdaptNSW Climate Risk Ready NSW Guide. This will allow us to readily adapt to the changing climate with informed decision-making and high certainty on the best practices to implement change.
- We have developed an adaptation guide for our employees to help us to plan and adapt infrastructure, processes, and systems to better respond to the climate change impacts we expect. Training to use climate data, tools, and risk assessments has also commenced, with continuous improvement of these materials at the heart of improving the maturity of the business.

