



# Supporting you to understand and manage the extremes of rainfall

**In the land of droughts and flooding rains, recent severe flood events serve as warnings for the emerging patterns of increased climatic variability across Australia.**

Understanding the risks and opportunities of our current and future communities is no simple task. The experienced Water Resources team quantify, plan, and design solutions to help understand and manage the impact of the extremes of rainfall on our natural and built spaces.

We listen to communities and collaborate with clients, at every level, across all areas of Water Resources -

flood risk, flood resilience, sustainable stormwater, design and water security. Our team applies an integrated approach to help plan resources, and to be better prepared for climatic extremes in the future.

By using industry leading software, tools and techniques our goal is to design and deliver sustainable, locally led, regionally delivered and globally supported outcomes.

**60+**

**DIVISIONAL & NATIONAL  
ENGINEERING  
EXCELLENCE AWARDS &  
HIGH COMMENDATIONS  
SINCE 1987 IN  
ENVIRONMENT, WATER  
CYCLE INFRASTRUCTURE  
& WATER ENGINEERING  
CATEGORIES**





## KEY SERVICE OFFERINGS

### Flood Risk

We utilise modelling software to develop hydraulic and hydrological assessments to define flood risk and its potential impact, and explore measures to manage flood risk.

- Flood risk definition
- Flood impact assessments
- Flood mitigation assessments
- Flood assessments for dams
- Overland flow investigations & assessments
- Dam failure impact assessments
- Flood risk management studies & planning
- Coastal adaptation studies



### Flood Resilience

Improvement in the resilient of communities through improved planning of responses to flood risk across the entire spectrum of flood emergency management actions and measures.

- Total Flood Warning Reviews
- Community Flood Action Planning
- Flood operational response reviews
- Emergency Flood Management Planning (Disaster Management)
- Flood Warning infrastructure reviews
- Flood Classification Review
- Operational hydrology reviews



### Sustainable Stormwater

We provide planning and design services with a goal to minimise the impacts of urban and infrastructure development on the environment, the hydrological cycle, and local communities by transforming stormwater from risk to a resource through an integrated approach to stormwater management.

- Stormwater management planning
- Stormwater quality & quantity modelling
- Water sensitive urban design/low impact development
- Stormwater harvesting
- Stormwater detention &/or retention
- Integrated water management
- Mine water management
- Catchment action plans



### Design

By applying an integrated approach of modelling and design, we translate engineering analysis of water into practical, efficient and robust designs

- Drainage networks
- Water sensitive urban design/low impact development
- Detention
- Stormwater harvesting
- Flood mitigation measures
- Waterway management
- Blue green infrastructure



### Water Security

We have comprehensive experience in the assessment and management of water supply systems. Our services span quantitative assessment of the level of reliability of water resources informed by catchment hydrology, through to providing planning advice on system mitigation and improvement.

- Quantitative water balance modelling
- Climate change assessments
- Water supply security assessments
- Water security & planning strategies
- Emergency water supply planning
- Drought management planning
- Mine water assessments
- Dams water



### Software utilised by our team:

- TUFLOW
- HEC RAS
- HEC HMS
- InfoWorks
- ICM
- XP-SWMM
- MIKE Hydro
- MIKE Flood
- MIKE 11
- RORB
- WBNM
- RAFTS
- waterRIDE
- MUSIC
- wFlow
- XP-SWMM
- OPSIM
- GoldSIM
- eWater Source
- 12D
- Civil3D





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**Stantec office locations:**



Communities are fundamental. Whether around the corner or across the globe, they provide a foundation, a sense of place and of belonging. That's why at Stantec, we always **design with community in mind**.

We care about the communities we serve—because they're our communities too. We're designers, planners, engineers, scientists, and project managers, innovating together at the intersection of community, creativity, and client relationships. Balancing these priorities results in projects that advance the quality of life in communities across the globe. Stantec trades on the Toronto Stock Exchange (TSX) and the New York Stock Exchange (NYSE) under the symbol STN.

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