



# GUIDELINES FOR POTENTIALLY EXPLOSIVE ATMOSPHERES

## PARTICIPATING MEMBERS

Icon Water	Unitywater
Mackay Regional Council	Urban Utilities
Melbourne Water Corporation	Water Corporation
Queensland Water Directorate	Whitsunday Regional Council
SA Water	Yarra Valley Water
Sydney Water	
<b>Service Provider</b>	Stantec
<b>End Date</b>	May 2023

## Background

National and international instances of explosions or near misses in wastewater infrastructure have been on the rise. In response, the Water Services Association of Australia (WSAA) and its members have developed their own internal guidance on how to manage the risk of the formation of a potentially explosive atmosphere. In doing so, they found that the guidance regarding the classification of potentially explosive atmospheres in wastewater infrastructure from Australian industry sources was not sufficient. This project, led by WSAA on behalf of participating Australian water utilities, delivered a national guideline for the classification of potentially explosive atmospheres in municipal wastewater infrastructure, with a specific focus on linear or network infrastructure.

## Outcomes

The guideline surveyed Australian water agencies to identify their needs, as well as to ensure reuse from existing best practices in the development of the guidance. It provides information on the likely contaminants found in the sewerage system, and how to effectively monitor them with a wide range of technologies. A simplified method to quickly classify wastewater network assets was developed, with the intent to allow for the classification of assets to be considered from the planning level onwards and identify areas where further sampling may be required. This also included the development of example classification drawings for network assets. For wastewater treatment plants, the current practice was documented with some suggestions as to the minimum classification required. Finally, guidance on emergency responses is provided to the industry to assist in the development of agency-specific guidelines.

## Key Benefits

The key benefits of the outputs from this project are:

- Increased consistency of outcome for hazardous area classifications nationally by allowing professionals who work with water agencies to start from a common point.
- Increased clarity about how, where, and what to sample to classify an area with potentially explosive atmospheres.
- Development of a low-cost, easy-to-apply method for the initial classification of wastewater network assets prior to confirming this classification during detail design.
- Comprehensive advice for organisations about the classification of wastewater assets.

## How to Access

This subscription project was funded by participating WSAA member utilities. The guideline will be made freely available on WSAA's website, with the endorsement of the funding utilities, to help promote and improve safety outcomes across the sector.

If you would like additional information, please contact WSAA at [info@wsaa.asn.au](mailto:info@wsaa.asn.au).