



HydroTerra

Environmental Monitoring Specialists

AI-POWERED POLLUTION DETECTION SERVICE

Real-time detection of pollution signatures in waterways, discharge points, stormwater outfalls and gross pollution traps.



OVERVIEW

HydroTerra's AI-Powered Pollution Detection service uses a fixed camera and cloud-based image analysis to identify visible pollution events in real time. Suitable for waterway monitoring, stormwater outfalls, gross pollution traps (GPTs), construction runoff and industrial discharge points.

A field camera captures images at set intervals and transmits them to a secure cloud service. An AI model analyses each image for indicators such as foam, oil sheen, turbidity plumes and colour changes. When a potential pollution event is identified, the system sends an instant alert with supporting imagery.

Delivered by HydroTerra with AI configuration and cloud processing, this service offers a practical, continuous and low-cost way to monitor sensitive environments without relying on manual image review.

HOW IT WORKS



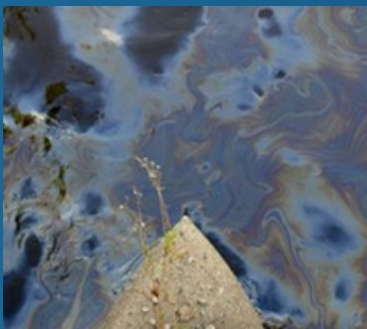
WHY THIS APPROACH IS DIFFERENT

AI-Powered Pollution Detection service focuses on smart automation and time-saving environmental monitoring:

- No AI model training required
- Real-time alerts for rapid response
- Low-cost and scalable deployment
- Simple installation and operation

Its flexible setup makes this AI Detection service an ideal solution for councils, environmental regulators, infrastructure operators and site managers seeking reliable pollution monitoring.

WHAT IT CAN DETECT



Oil and Fuel sheen



Stormwater outfall



Gross pollution trap

- Foam
- Oil and fuel slicks
- Turbidity plumes
- Colour changes
- Visible pollution indicators

**Litter-focused monitoring can be trialled on request.*

APPLICATION and BENEFITS

APPLICATIONS

- Stormwater outfalls
- Construction runoff and sediment plumes
- Mining drainage channels and tailings
- Industrial discharge points
- Creeks, rivers and waterways
- Environmental compliance monitoring
- Catchment-scale early warning systems

KEY BENEFITS

- No manual image review needed
- Early detection of visible pollution events
- Supports compliance for construction, mining and environmental monitoring
- Quick deployment and simple operation
- Scalable across large networks and catchments

PROVEN IN THE FIELD

CASE STUDY

1,700+ images analysed since September 2025

In a recent deployment, a stormwater pollution alert system analysed over 1,700 images, detecting changes in water colour, foam and surface scum. One detection triggered an immediate pollution alert, enabling a real-time report to the EPA for investigation.

By automating detection and delivering timely alerts, the system enabled faster decision-making, reduced unnecessary site inspections, and helped water asset managers save time and resources.



Automated detection: clean flow (left, centre) versus a flagged pollution event (right).