A9: Effective and affordable opportunities for the treatment of industrial pollutants in stormwater drains

Objective(s)

To determine the most effective ways to reduce pollution from industrial estates, including structural and non-structural pollution control options. It will also trial innovative assets that treat dry weather flows in stormwater drains and assess benefits for performance and maintenance of downstream stormwater treatment wetlands.

Why this research is important

Industrial areas can be major sources of pollution to local waterways and therefore, a significant risk to environmental values. The continued development of technologies to treat dry weather flows from industrial areas will increase confidence in our ability to effectively management pollution from industrial catchments, influence policy and planning and help to support the achievement of the HWS for Greater Melbourne. There is also potential for this project to influence urban stormwater management policy and for best practice control measures to be incorporated into standards and guidelines.

Contribution to Melbourne Water research priorities

HWS Key Research Area: Understanding the environmental impacts of pollutants, including contaminants of concern, to inform risk-based management of waterways across the region.

Approach

Online Treatment Solutions: Treatment Facility

Two programs within Melbourne Water are currently investigating building pilot online treatment facilities to reduce pollutants from industrial areas: Bayswater Industrial Online Treatment and Stony Creek Online Treatment. It is proposed that we will continue to support these programs by aiding in the scoping and designing of these online facilities.

Online Treatment Solutions: Pre sampling of online treatment facility (if approved)

Pre sampling of the receiving waterway will be conducted prior to the online treatment facility being built to obtain baseline data of the pollutants entering downstream waterways.

Assessment of Control Options – Synthesis document

Current practices in Victoria reviewed by A3P in 2020 will be revisited to understand if there have been improvements made towards better controls. Best practice management of pollutants from industrial areas will be refined and developed.

Research Note: Case studies of control options to manage pollutants from industrial estates

A research note will be developed for the benefits of implementing structural online treatment facilities to treat and reduce pollutants from industrial estates.

Assessment of built new online treatment facility

Assessing the performance of new online treatment facilities will be carried out before and after each asset has been built (future years of the project).

Key outputs

- Engagement to support design and construction of online treatment assets and assessment of the effectiveness of online treatment assets
- Synthesis of structural and non-structural industrial pollution control options

Expected benefits

- Stakeholders have awareness of industrial estate treatment options, enabling informed decision making.
- Increased confidence in the ability of online treatment assets to manage industrial pollution.
- Could be incorporated in best practice management guidelines for industrial runoff.

For more information, contact Claudette Kellar, Claudette.Kellar@rmit.edu.au, or at Melbourne Water: Slobanka.Stojkovic@melbournewater.com.au or Rhys.Coleman@melbournewater.com.au