



PROJECT OVERVIEW:

As part of collaborative research with the **University of Toronto Trash Team**, LittaTrap™ systems were deployed within an industrial stormwater environment to assess the scale of pre-production plastic pellet (“nurdle”) loss entering stormwater infrastructure.

The project highlighted the role of at-source stormwater treatment in intercepting pollutants before they enter downstream networks and receiving environments.

Stormwater360 is also an official partner of **Operation Clean Sweep®** New Zealand.

Operation Clean Sweep® is a global initiative focused on helping the plastics industry achieve zero plastic pellet loss. By combining industry best practices with effective stormwater controls, solutions such as LittaTrap™ with a dedicated nurdle liner provide a practical pathway to help sites prevent pellet loss and support zero pellet loss objectives.

Over the course of a year,
13 x LittaTrap™'s deployed across the
properties of five plastic companies
in Toronto prevented nearly
5.5 million plastic pellets from
entering the local watershed.

THE CHALLENGE:

Plastic pellets used in manufacturing and transport can be unintentionally released during handling and storage operations. Due to their small size and buoyant properties, pellets can rapidly migrate through conventional drainage systems and contribute to microplastic pollution in waterways.

The study aimed to better understand:

- The scale of pellet loss within industrial stormwater systems
- The effectiveness of catch basin filtration technologies
- Opportunities for source control and pollution prevention

SOLUTION:

LittaTrap™ inlet filtration systems were installed within the stormwater network to capture gross pollutants and pre-production plastic pellets conveyed during storm events.

Developed from New Zealand's first patented catch pit insert system, the LittaTrap™ was selected due to its:

- Modular retrofit capability
- High pollutant capture capacity
- Practical maintenance access
- Suitability for industrial stormwater environments

For plastic manufacturing and handling sites, the addition of a nurdle liner within the LittaTrap™ provides enhanced capture of small plastic pellets, helping facilities reduce the risk of pellet discharge and support Operation Clean Sweep® zero pellet loss commitments.

RESULTS:

Over the course of a year, 13 x LittaTrap™'s deployed across the properties of five plastic companies in Toronto prevented nearly 5.5 million plastic pellets from entering the local watershed.

The project demonstrated the significant pollutant loading that can occur within industrial stormwater systems and reinforced the importance of at-source treatment approaches for microplastic mitigation.

KEY OUTCOMES

- Significant reduction in pellet discharge to downstream environments
- Improved visibility of pollutant pathways within stormwater systems
- Practical maintenance and monitoring access
- Support for industrial pollution prevention initiatives and stormwater compliance objectives

APPLICATIONS

LittaTrap™ systems are now used globally across:

- Industrial facilities
- Municipal stormwater networks
- Transport infrastructure
- Commercial developments
- Plastic manufacturing and logistics sites

By capturing pollutants at the source, LittaTrap™ helps protect waterways, reduce plastic pollution, and support a cleaner future for communities and the environment.