

EXECUTIVE SUMMARY

Hydrodynamic separators (HDS) are intended to remove sediment, screen debris, and separate hydrocarbons from stormwater for small drainage areas. They are typically installed underground as flow through devices within the storm sewer network. In Ontario, there are approximately 13,000 units, with approximately 1,000 new units installed each year. These devices require frequent inspection and maintenance to ensure they continue to function according to design. When they are not maintained, the devices fill with sediment and debris, and provide little to no stormwater treatment, resulting in the degradation of aquatic life and water quality in downstream watercourses.

Unfortunately, the location and ownership of many of these units are not currently being tracked, and investigations in other jurisdictions have shown that maintenance is more often the exception than the rule. Best estimates from manufacturer databases suggest that only about one quarter of existing HDS in Ontario have been inspected, and even fewer have been serviced.

In this paper the following mechanisms and legal avenues, through which municipalities and other government agencies can enforce and improve maintenance of HDS, are reviewed:

- Environmental Compliance Approvals
- Site Plan Agreements
- Municipal By-laws
- Maintenance Agreements

Case studies from three municipalities in Ontario (London, Peterborough and Pickering) that have had some success in educating HDS owners and improving maintenance practices are presented and discussed. A simple, user friendly web-based tool is introduced as a means for government agencies to track the location, inspection and servicing of existing and new HDS in the Greater Toronto Area. Finally, the following recommendations are presented to outline how municipalities can establish programs and procedures to ensure that new and existing HDS are adequately maintained.

- Implement Appropriate Bylaws (i.e. sewer use, waste discharge, etc.)
- Develop an inventory and database
- Develop educational materials
- Devote appropriate staff resources
- Adopt best practices for municipally-owned HDS
- Report on Your Experience