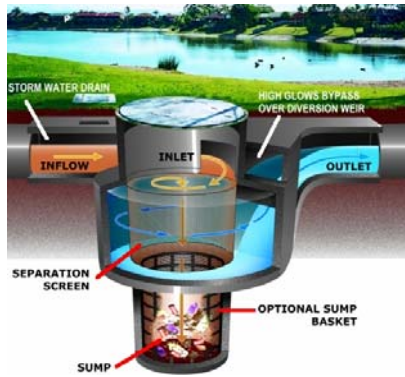


CSO Treatment Technology Manual



Client:
**Government of Canada and
 Great Lakes Sustainability Fund**

CSO Treatment Technologies: A Comprehensive Design and Resource Manual

Increasingly, municipal wastewater authorities are exploring new and innovative treatment technologies specifically designed for Combined Sewer Overflows (CSOs). These technologies, when applied as part of an overall wastewater management strategy, can produce efficient and cost-effective solutions for CSOs. However, like all technologies, they require systematic design and proper operation. In many cases, the basic information needed by municipal decision makers and their engineers to evaluate, select, and design CSO treatment technologies has been difficult to assemble. Recognizing this need, the Government of Canada, through the Great Lakes Sustainability Fund, retained XCG Consultants, in association with several consultants, to develop a CSO Treatment Technologies Manual. The objectives of the manual are two-fold: (a) to provide information about physical and physical-chemical CSO treatment technologies; and, (b) to assist users in the selection, design, and application of CSO treatment technologies. The technologies that were reviewed include:

- Screening
- Degritting
- Retention treatment basins
- Chemically enhanced high rate sedimentation
- Continuous Deflective Separation®
- Hydrodynamic (vortex) separation
- Dissolved air flotation
- Fuzzy Filters®
- Chlorination/de-chlorination
- UV irradiation

The Manual contents will include a technology by technology review presenting technology descriptions, selection and application criteria, the basis-of-design, pre-treatment requirements, underflow management requirements, operating requirements, life cycle costs and most critically, thoroughly reviewed performance data. The review of the current high rate treatment technologies is being conducted through literature and Internet searches, communication with manufacturers of specific technologies, and communication with municipal and other agencies in North America and Europe responsible for the installation, operation, and maintenance of these facilities.

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