

# Regional Municipality of Halton – Pump Station Maintenance Strategy



In 2006, Earth Tech (ET) was retained by the Regional Municipality of Halton to conduct an analysis of its pump station maintenance processes, and to formulate an effective Pump Station Maintenance Strategy. The Region of Halton, with a large geographic area and generally flat topography, is dependant on a large number of pump stations to ensure that water and wastewater services are provided reliably. With over 100 pump stations and growing, the Region realized that optimizing pump station maintenance practices in association with improving pump station maintenance productivity would result in improved utility reliability in a manner that conforms with the Region's general approach to Asset Management.

The project conducted by ET was comprised of eight steps as shown below:

**Step 1:** Conduct current situation analysis and document the current PS maintenance processes.

**Step 2:** Conduct Strength, Weakness, Opportunities Threats (SWOT) Analysis.

**Step 3:** Conduct PS maintenance comparative analysis using results from the National Water and Wastewater Benchmarking Initiative and other PS maintenance best practices.

**Step 4:** Conduct PS maintenance option brainstorming and develop a list of possible attentive PS maintenance strategies.

**Step 5:** Develop a Summary of Desired Performance Targets (Levels of Service)

**Step 6:** Evaluation of Alternative Maintenance Strategy Options

**Step 7:** Prepare Maintenance Management Business Process "Brown Paper".

**Step 8:** Recommend High Level Implementation plan based on the preceding analysis

Eventually this project identified a more efficient way to conduct pump station maintenance that best minimizes cost (that takes the full life cycle into account), while meeting all regulatory and service level requirements.

## PROJECT DETAILS

Client: Regional Municipality of Halton

LOCATION: Greater Toronto Area, Ontario

## REFERENCE INFORMATION

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## PROBLEM

Due to its extensive use of Pump Stations, the Region of Halton had to identify a cost-effective way to conduct pump station maintenance while meeting all regulatory and service level requirements.

## CHALLENGES

- Over 100 pump stations scattered on a large and dense urban area,
- High traffic volumes in the area,
- New Ministry of Labour regulations regarding confined space entry require an additional 3<sup>rd</sup> crew person in many instances.

## SOLUTION

- Consider a broad range of alternative pump station maintenance strategies,
- Make a meaningful comparison against the current approach using a process benchmarking methodology,
- Identify pros and cons for the various alternatives.

## BENEFITS

The Region of Halton was provided with all the necessary tools to improve levels of service while making substantial savings on pump station maintenance costs.