

REGIONAL MUNICIPALITY OF HALTON – PROSPECT PARK WATER FACILITIES TREATMENT STRATEGY REVIEW

The objective of the project was to review the plan to expand the treatment capacity at the Prospect Park Water Facilities (PPWF) to support future growth, while improving operability. The key issues to address was a highly variable raw water ammonia concentration which rendered the iron and manganese pre-oxidation process almost impossible to control. This was particularly true given the long reaction time required to address chelated manganese resulting in significant process dead time. Mitigation of downstream impacts on filter media, disinfection process and chemical water balance, as well as improved operability were desired outcomes of the study. C3W lead the investigation for problem definition, identification and evaluation of alternative solutions, pilot scale projects, and recommendation of a preferred solution. Specific tasks included:

- Collection and review of background information and all relevant documentation.
- Define the operational and process issues experience to date, and identify the most likely cause(s) of these issues.
- Establish evaluation criteria that will be used to assess alternative solutions and lead Region staff through a pair-wise evaluation process to rank the relative importance of the criteria.
- I d e n t i f y alternative solutions to the process and operational issues.
- Conduct a conceptual review of the short-listed alternative solutions and lead the project team through an evaluation of the alternatives.
- C o n d u c t treatability and pilot testing of alternative solutions.
- Provide the Region with a preferred PPWF treatment strategy including an opinion of probably life-cycle cost.



The project was delivered on-time and under budget, including the delivery of bench-scale testing by the University of Toronto.