

Georgetown Water Treatment Plant



Client:
**Regional Municipality of Halton,
Ontario**

Georgetown, in the Town of Halton Hills, is supplied by nine ground-water wells located in four well fields. The Region of Halton has received many colored water complaints from customers over the past several years. In order to ensure high quality water to the customers in Georgetown, the Region of Halton retained XCG Consultants to complete two projects. The projects included a study to identify the causes and develop recommendations to minimize the potential for poor water quality in the future, and a Class Environmental Assessment (EA) Study to select a preferred alternative. XCG also provided support to the detailed Design Team during the detailed design phase of the project.

The first study involved identifying the causes of the colored water events and developing recommendations to minimize the occurrences of those events. The study included treatability testing to determine the effectiveness of sequestration in controlling iron and manganese, and the effectiveness of a catalytic media filtration process in removing iron and manganese from the source water. The study considered the cost and effectiveness of a number of alternatives. It was recommended that a catalytic media filtration facility be constructed as a long term measure to remove iron and manganese from the source water.

Subsequent to the original study, a Class EA study was undertaken. Alternatives for reducing the colored water events included to do nothing, system maintenance, system operational changes, sequestration, and removal alternatives that include forced aeration, advanced oxidation, catalytic media filtration, potassium permanganate oxidation, manganese greens and filtration, and biological filtration. The study also considered a wide range of evaluation criteria including cost, impacts on the socio-economic, cultural, and natural environments, impacts on existing and proposed land uses, and impacts on existing infrastructure.

The Class EA study concluded with a recommendation to implement sequestration as a short term solution and a recommendation to construct a catalytic media filtration facility as a long term solution. Filter backwash wastes will be settled, with the supernatant directed back to the head of the plant and the solids to the sanitary sewer. The project also included the completion of a preliminary design of a catalytic media filtration facility.

Following the completion of the Schedule B Class EA study, the Region selected a Design Team led by R.V. Anderson Associates Ltd. to prepare the detailed design of the catalytic media filtration facility. XCG was an integral member of the Design Team and provided design support throughout the detailed design process.

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