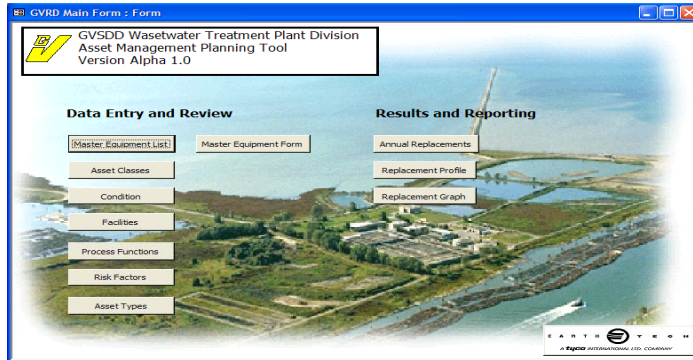


Wastewater Treatment Plant Asset Management System Study



Earth Tech was retained by the Greater Vancouver Region District (GVRD) to develop strategies, standards and procedures to ensure the financial sustainability of the assets within the 5 GVRD wastewater treatment plants. Specifically, this assignment related to the development of asset management business processes and an asset management system implementation “blueprint” that can be utilized by the District in a schedule that meets their future infrastructure management and long range budgeting needs.

The methodology used to develop the asset management system is based on the National Research Council of Canada’s “Six Whats of Asset Management Planning”. This framework is based on answering key infrastructure related questions including: “What do you have?”, “What is it worth?”, “What is its condition?”, “What do you have to replace first?”, and “What is the cost?”

Based on this framework, Earth Tech developed procedures to evaluate all of the assets at the 5 WWTPs. The first step in this procedure was leveraging the asset inventory from the GVRD’s CMMS system. Standards and procedures for evaluating the asset condition and risk were then established. The remaining lifecycle and expected replacement cost of each asset in inventory was then predicted according to a consistent evaluation criteria. Finally, a range of scenario-testing tools and reporting formats were designed so that the District could test various asset replacement and funding strategies and see the effect of each over the long term. As a test and demonstration of this functionality, a custom prototype database was designed and implemented to leverage from existing GVRD information systems (and not to further complete matter by through unnecessary data duplication).

PROJECT DETAILS

CLIENT: Greater Vancouver Regional District
LOCATION: British Columbia, Canada

REFERENCE INFORMATION

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PROBLEM

Assets within the District’s 5 wastewater treatment plants range in age between “new” and almost 50 years old. Lack of appropriate asset data and business processes made it difficult to prepare a long-range asset re-placement and renewal program with reliable and consistent information.

CHALLENGES

Even with a modern CMMS and other information systems, critical asset information and business planning process were not available to meet basic asset management and Long Range Plan requirements.

SOLUTION

A proven asset management-planning framework helped to document and install a business processes designed to gather all basic but fundamental asset attributes necessary to plan a long-range renewal program. This included an information management framework to leverage existing GVRD systems.

BENEFITS

The new business processes in association with the consolidated asset data allows the GVRD to accurately predict asset replacement and renewal requirements, and to test a range of alternative replacement and funding strategies.