

Feasibility of Using Reverse Osmosis to Remove Heavy Metals and Coliforms from Water

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Infinity's project objectives are to conduct a detailed bench scale pilot study to further quantify the effectiveness of reverse osmosis to treat heavy metals and biological contaminants found in some potable water sources. The objective of the case study is to obtain enough analytical data on the contaminant parameters listed above to establish that reverse osmosis water treatment is an efficient method for treating water sources that are classified as non-potable and not for human consumption. The technology will help all communities to supply quality water for their residents.

The primary objectives of the case study will be to determine if the following manmade or naturally occurring contaminants can be successfully removed or reduced:

- Heavy metals, and
- Total coliforms, fecal coliforms and heterotrophic bacteria.

Targeted endpoint parameters will be compared to current Canadian Environmental Quality Guidelines for water use: Drinking, Recreational, Aquatic and Agricultural, respectively.

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Dr. Saint-Fort holds a M.Sc. in water and soil chemistry from the University of Laval and a Ph. D. in environmental chemistry from the University of Nebraska.

As a full-time instructor at Mount Royal College in Calgary, Alberta and an environmental practitioner, Dr. Saint-Fort has taught courses on groundwater contamination, site investigation and remediation. Dr. Saint-Fort's primary technical and consulting activities encompass vadose/groundwater investigation, soil remediation/reclamation design, waste management, and water quality investigation.

Furthermore, Dr. Saint-Fort has served on several committees dealing with soil, waste and water contamination issues. Dr. Saint-Fort has authored several scientific research articles, technical consulting reports and advised several graduate students.