



## Corrosion Control in Potable Systems



### Commercial · Multi-unit Residential · Institutional

Having a “pure” water supply feeding your building sounds good in theory, but unfortunately it does come with **expensive side-effects** when the water is too pure: corrosion.

Certain chemical parameters often found in water supplies such as low dissolved mineral content, low TDS (total dissolved solids), a low pH and possible dissolved oxygen content are the perfect recipe for corrosion of metal-based piping systems (especially copper). These parameters are exactly what we find in **surface water reservoirs** that feed many BC municipalities both big and small.

British Columbia is currently undergoing the “**new leaky building syndrome**” as copper water mains are experiencing first pin-hole leaks, and then complete piping failure due to internal corrosion. Water legislation in Canada only addresses safety for drinking, but does not address corrosive aspects.

Not addressing this issue early enough in the life of your plumbing system will result in exceptionally high repair or re-plumbing costs. Costs over a million dollars are not uncommon for large condominium or commercial buildings.



# How Does it Work?

What happens if you do nothing:

- 1) Your building will experience “pin-hole” leaks – very small holes in your piping that start to leak water. These pin-holes will appear throughout your building and spread quickly. You will spend money trying to keep up with these pin holes.
- 2) Sooner or later, you will likely experience total system failure as the pipes dissolve aggressively until a major rupture takes place.
- 3) You may exhaust your strata reserve funds (if available) and typically levee a special assessment to re-plumb your entire building (condos) or spend an enormous amount repairing the problems. Costs of over \$1 million are not uncommon for large buildings.

How can we deal with this problem?

- Fortunately the issues that cause corrosion are easily fixed with a corrosion control system.
- A drinking water safe neutralizing agent (i.e. mineral) is added into your water main at the point of entry to the building. The mineral increases the pH and TDS of the water just enough to drastically reduce the corrosion within the building. This is the same process undertaken by some municipalities city wide.
- A corrosion control system can extend the life of your plumbing by decades.

Why should we consider this?

- 1) Major cost savings. A corrosion control system is a fraction the cost of re-plumbing your building.
- 2) Do you get blue-green staining on white fixtures? That colour is copper dissolving from your pipes. Eliminate these stains that are difficult to remove.
- 3) Dissolved copper and lead in older buildings are often well in excess of Health Canada guidelines for drinking water and can pose health hazards. Eliminate the copper/lead in your drinking water.



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