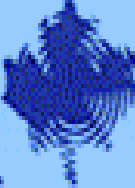


CWWA  ACEPU



Canadian Water and Wastewater Association
Association canadienne des eaux potables et usées

“Creating the Winning Conditions for Technological Innovation in Municipal Water and Wastewater Infrastructure”

Key factors affecting the use and adoption of innovative water and wastewater technologies.

T. D. Ellison
Executive Director
Canadian Water and Wastewater Association.
(www.cwwa.ca)

Hypotheses

- There is beneficial technology that is not being adopted
- The benefits exceed the costs and these are known or appreciated
- Municipalities cannot / do not keep up-to-date with technology or innovation
- North America (our field of reference) leads the field.

Key Factors – Municipal Systems

Ignorance..... (I'm not up to date on the new stuff! No one told me!)

Fear..... (Will it work? Will I be the laughing stock of my peers?)

Conservatism.... (I know what works!)

Funding..... (Can I persuade the boss to fund this new stuff? I just invested in something 10 years ago)

Regulations..... (The operating certificate would have to be changed, and)

Technology Applications

- Distribution/collection system – construction and materials
- Distribution/collection system – maintenance techniques
- Treatment technology and process trains
- Operational controls – SCADA systems
- Quality Monitoring devices – rapid detection
- Security systems – physical and electronic

Essential Co-relations

Application	Relevant Factors
Construction	Conservatism, Funding
Maintenance	Ignorance, Conservatism, Funding
Treatment	Ignorance, Funding, Regulations
SCADA	Ignorance, Conservatism, Funding
Monitoring	Funding, Regulations
Security	Ignorance, Funding

Non-municipal Systems

Point-of-use/Point-of-entry drinking water treatment systems:

- “Regulated” in respect to performance and material safety (certified under NSF Standards)
- Considerable innovation and marketing
- Individual building owner decisions (funding)
- These products and technologies overlap with small systems technologies

Non-municipal Systems

On-site wastewater treatment systems:

- Cover both residential sanitary and industrial process waste systems
- Neither is effectively “regulated” for performance
- Very little post-installation monitoring
- Have a profound effect on environment and municipal system influents

Non-municipal Systems

- Generally not a major investment decision
 - funding approval not relevant
- Building owner may not need any approval
 - funding and regulation not relevant
- Decisions are private - no fears
- Intense marketing - overcomes ignorance
- Monitoring is haphazard

Municipal System Solutions

- Independent technology evaluation would provide some assurances to initial potential investors
- INFRAGUIDE best management practices provide peer confidence
- Reduce burden of prescriptive regulatory processes and conditions
- Where appropriate provide financial/funding incentives
- Verify international approaches

Conclusion

- In general, I think we are doing alright (no better, no worse than other areas of the world)
- We could improve our knowledge of best systems and improve information dissemination
- We could re-focus our regulatory system to avoid prescriptive approaches
- Utility approaches to municipal system management would free decisions makers.

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