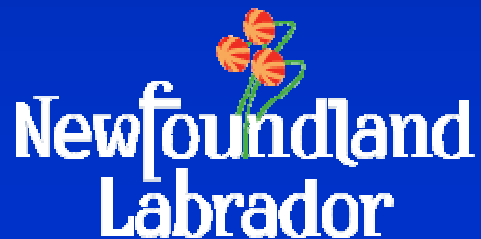


Clean and Safe Drinking Water Workshop - Summary



**GOVERNMENT OF
NEWFOUNDLAND
AND LABRADOR**

Department of Environment and Conservation

Gander

March 24-26, 2009

Introductions



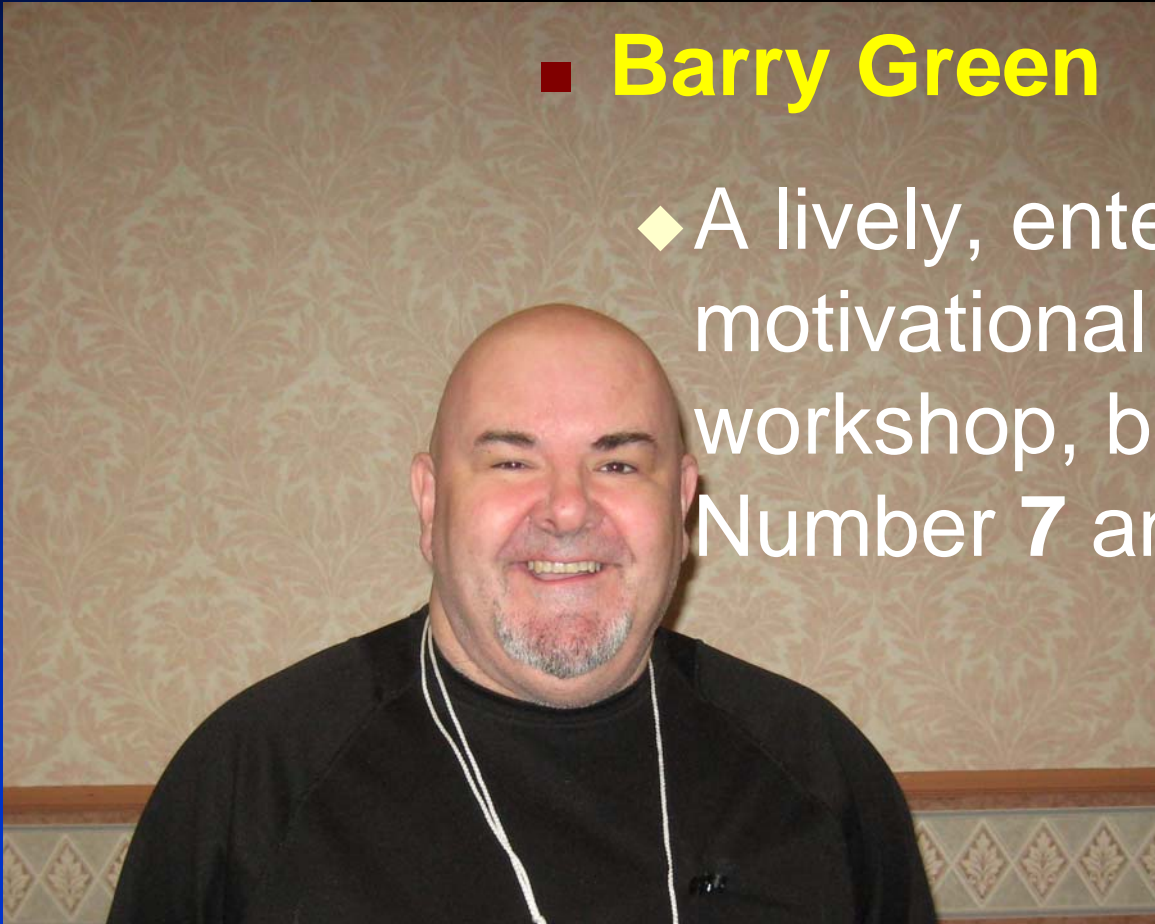
■ Opening Remarks

- ◆ Deneen Spracklin, Conference Chair
- ◆ Welcome, and Introduction of Keynote speaker

Keynote Address

■ Barry Green

- ◆ A lively, entertaining, and motivational start to the workshop, brought to us by the Number 7 and the Letter L

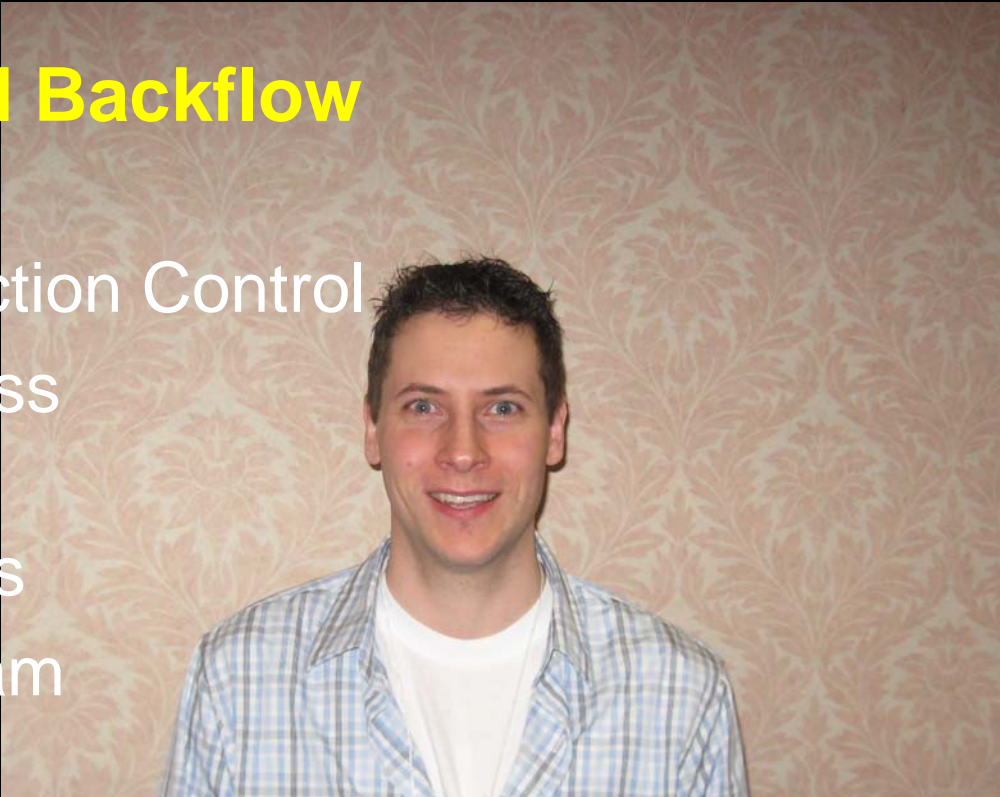


Jason Phillips, P.Eng. City of St. John's



■ Cross Connections and Backflow Prevention

- ◆ Theory of Cross Connection Control
- ◆ Methods to Prevent Cross Connections
- ◆ Control Program Options
- ◆ City of St. John's Program



Annette Tobin P.Eng.

- Dept of Environment & Conservation

Terry Battcock, C.P.H.I.(C)

- Dept. of Government Services



- **Drinking Water Quality Monitoring In NL**
- **Annette-**
 - ◆ **MBSAP, Monitoring of Drinking Water Quality (Chemical)**
 - ◆ **Reporting is essential**
- **Terry-**
 - ◆ **Bacteriological Water Quality Monitoring**
 - ◆ **Waterborne Disease**
 - ◆ **Boil water Advisories**



Ben Pittman, P.Eng

Town of Amherst, NS



Amherst

"Faith in our People, Pride in our Products"

■ Operation and Maintenance of Drilled Wells

- ◆ Amherst , NS: 10,000 p - 4 to 5 ML water/day
- ◆ Water system history
- ◆ Groundwater Protection
- ◆ Maintenance Schedule
- ◆ Operational Challenges
- ◆ Video



Operating Potable Water Dispensing Units in NL

- Gerry Lahey for Black Tickle -Domino
- Brian Caines-Buchans
- Albert Kendall – Burnt Islands
- Terry Stead – Howley
- Pat Miller- St. Lawrence
- Gerry Lahey, CET, Jim Pollett, CTech., & Darren Patey, CET - OETC



PWDU Presenters

- Albert Kendall
- Pat Miller
- Rob Lane



- Terry Stead



- Gerry Lahey



Future Direction of the OETC



- Operators and Municipal Officials
- ENVC Staff
 - ◆ Deneen Spracklin, P.Eng.
 - ◆ Ervin McCurdy, CET
 - ◆ Gerry Lahey, CET
 - ◆ Jim Pollett, C.Tech.
 - ◆ Darren Patey, CET
 - ◆ Susan George, Co-op Student (Environmental)



Hon. Charlene Johnson

Minister of Environment and Conservation

■ Greetings from Government of Newfoundland and Labrador

- ◆ Welcome the speakers and delegates to the 8th annual workshop
- ◆ Government's role in drinking water safety
- ◆ Operator of the Year Award
 - ★ Gerard Lee – Volunteer
 - ★ Wayne Bennett – Paid Operator




Newfoundland
Labrador

Peter Dennis

- RL Dennis Assoc. Ltd.



Radiodetection
AN SPX COMPANY

information from underground™

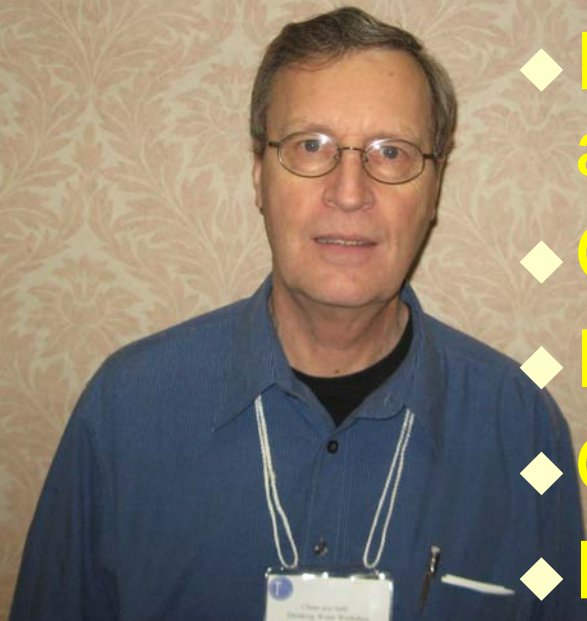


- ◆ Principles and techniques in Buried Utility Location
 - ★ Electromagnetic Fields
 - ★ Passive or Active Methods
- Signal Peaks and Nulls
 - ★ Frequency Selection

Joss Durepos, P.Eng. President, Durpro



Municipal

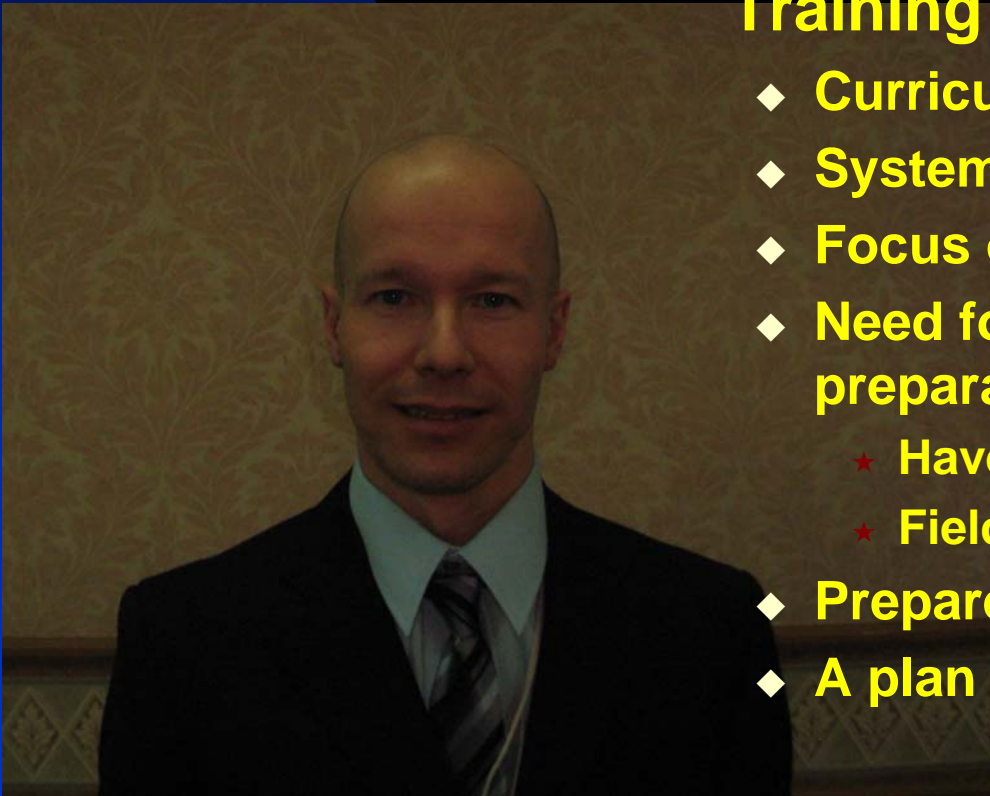


- Potable Water Treatment Unit Treatment Technologies
 - ◆ Filtration Design, Operation and Maintenance
 - ◆ Ozone as an oxidant
 - ◆ Pre and Post Treatment
 - ◆ Operator Knowledge
 - ◆ Maintenance requirements



■ Introduction to On-site Flushing Training

- ◆ Curriculum Development
- ◆ System Specific Flushing Plans
- ◆ Focus on Unidirectional Flushing
- ◆ Need for both office and field preparation
 - ★ Have as-builts or good set of plans
 - ★ Field measure flows and pressures
- ◆ Prepare worksheets
- ◆ A plan to use for years to come



Deborah Smith

ST. JOHN'S

DEPARTMENT OF PUBLIC WORKS & PARKS
ENVIRONMENTAL SERVICES DIVISION

- pH Adjustment
- Definition of pH
- pH Scale is logarithmic
- Measuring pH
- Laboratory procedures
- Care of pH meters and electrodes
- pH adjustment of drinking water



Mike Blair, P.Eng.



■ Packaged Treatment System to Meet Regulatory and Aesthetic Objectives: Benefits for Small Communities

- ◆ GCDWQ parameters of interest
- ◆ Packaged Treatment Plants
- ◆ Performance of various technologies in achieving desired results



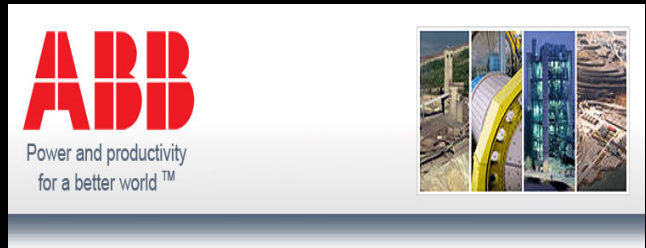


- **Best Management practices for Controlling DBPs in NL: What Works, What Doesn't, and What Could**
 - ◆ Discussed current practices in NL
 - ◆ System design, system operation, system maintenance all keys
 - ◆ Early removal of NOM is key
 - ◆ No one sure fix for all
 - ◆ Provided Decision Making Tools

Steve Mongrain

■ Energy and Maintenance Cost Savings in Pumping Applications

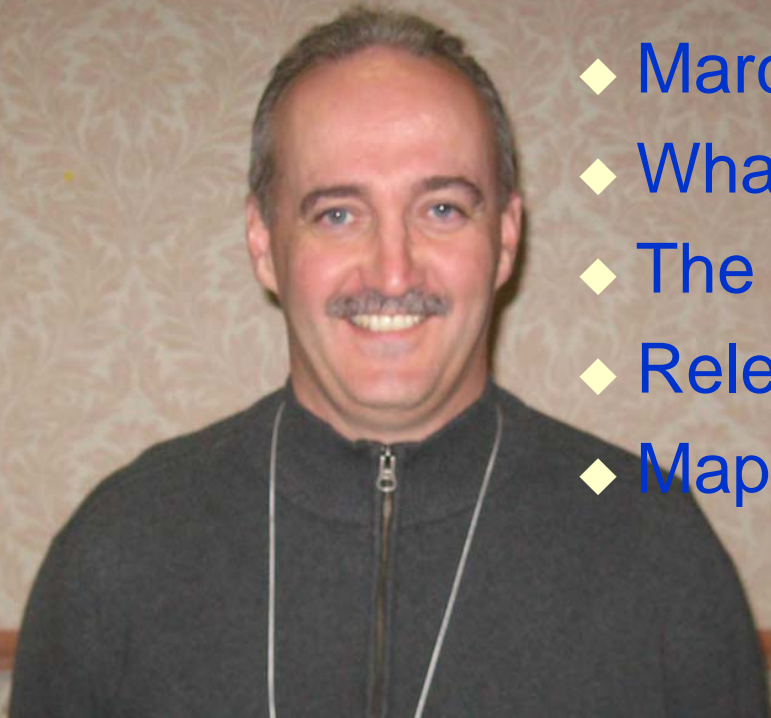
- ◆ Pumps and Pump Selection
- ◆ Life Cycle Costs re pumping
- ◆ Variable Speed Drive Advantages



Paul Neary

Water Resources
Management Division

- Newfoundland and Labrador Water Resources Portal
 - ◆ March 31, 2009
 - ◆ What is a Portal
 - ◆ The OCIO – security review
 - ◆ Release Point for future data
 - ◆ Map Capabilities !!!



Neil Thomas, P.Eng

Fredericton

what
a city
should be.

- Treatment Alternatives for Groundwater Supplies
 - ◆ Iron and Manganese removal
 - ◆ History of Fredericton water
 - ◆ Geology issues
 - ◆ Challenges faced
 - ◆ Completion of new plant



Dr. Asit Mazumder Ph.D University of Victoria

res*eau
waternet



- Many small water systems in Canada
- Challenges/Issues with source/tap water quality
- No “one size fits all” technology
- New pollution indicators like caffeine , Ibuprofen
- Role of Réseau-Waternet
- Challenges
- Knowledge transfer



Herbert Card

- Dept of Environment & Conservation

Brad Penney

- Dept. of Municipal Affairs



■ Chlorination Selection Guidelines

◆ Chlorination Systems in NL

★ 27.5% gas, 62% hypo

◆ Design Considerations

◆ Safety Aspects

◆ Life Cycle Costs

Congratulations to the Operators of the
Year !!
Gerard Lee, and Wayne Bennett



Thank you!

Exhibitors:

Atlantic Purification Systems
Atlantic Technical Services Ltd.
CB Tubecraft
Electric Motor and Pump
EMCO/Waterworks Supplies Ltd.
E.N.G. Environmental Technologies
EnviroMed Detection services
FloTech Enterprises
Fracflow Consultants Inc
H₂O Innovation Inc.
ITT Water and Wastewater
Kemtag Enterprises
R L Dennis Associates Ltd.
Sansom Equipment
Urecon Ltd.
Wolseley Canada Inc.

Thank you!

Department of Municipal Affairs

for

Financial Support:

Funding Assistance to Municipalities

Thank you!

Organizers	Deneen Spracklin and OETC staff, registration database and Trade Show – Susan George
Moderators	Deneen Spracklin, Gerry Lahey, Jim Pollett, Darren Patey and Ervin McCurdy
Audio, Visual and IT	Paul Neary, Leona Hyde
Photographs	Michael Colbert
Registration Desk	Annette Tobin, Paula Dawe, Susan George and Grace Gillis
Presenter Assistants (Travel Claims)	Christa Ramsey, Darren Patey, Gerry Lahey, and Jim Pollett
Trade Show and Set-Up	Gerry Lahey, Jim Pollett, Darren Patey, Susan George, Floyd Barnes, Michael Colbert, Chris Blanchard, Christa Ramsey, Annette Tobin, Paula Dawe, Deneen Spracklin and Ervin McCurdy

Our Technical Team

- Paul Neary
- Leona Hyde



Our Registration Desk





Thank you!

Participants

- Please provide your comments to us on any matter you wish to mention about this workshop so we can address those matters in the future.
- If you would like to have a colour version of these presentations, please check our web site and we will have them there for you to download.