March 8, 2017

Dear [Redacted]

Re: Your request for access to information under Part II of the Access to Information and Protection of Privacy Act [Our file #ENV/013/2017]

On January 31, 2017 the Department of Municipal Affairs and Environment (previously Environment and Climate Change) received your request for access to the following records/information:

"Copy of any and all correspondence, emails, faxes, etc between the Town of Upper Island Cove and The Department of Environment since the year 2007"

On February 2, 2017 the Department received the following modified wording:

"Copy of any and all correspondence, emails, faxes, etc between the Town of Upper Island Cove and the Water Resources Division of The Department of Environment since the year 2007"

On February 28, 2017 the Department advised that, with approval from the Information and Privacy Commissioner under Section 24 of the Act, the 20 business day time limit for responding to your request had been extended for an additional 7 business days and that we expected to respond to your request by March 9, 2017.

I am pleased to inform you that a decision has been made by the Deputy Minister of the Department of Municipal Affairs and Environment to grant access in part to the requested information. Portions of the attached documents have been severed in accordance with the following exceptions to disclosure as specified in the Act:

Section 40(1): The head of a public body shall refuse to disclose personal information to an applicant where the disclosure would be an unreasonable invasion of a third party's personal privacy.

As required by subsection 8(2) of the Act, we have severed information that is exempted from disclosure and have provided you with as much information as possible. In accordance with your request, the appropriate copies of records have been enclosed.
Section 42 of the Act provides that you may ask the Information and Privacy Commissioner to review the processing of your access request or you may appeal to the Supreme Court Trial Division. A request to the Commissioner must be made in writing within 15 business days of the date of this letter or within a longer period that may be allowed by the Commissioner.

The address and contact information of the Information and Privacy Commissioner is as follows:

Office of the Information and Privacy Commissioner  
2 Canada Drive  
P. O. Box 13004, Stn. A  
St. John's, NL  
A1B 3V8  
Telephone: (709) 729-6309  
Toll-Free: 1-877-729-6309  
Facsimile: (709) 729-6500

In the event that you choose to appeal to the Trial Division, you must do so within 15 business days after you receive the decision of the public body, pursuant to section 52 of the Act.

Please be advised that this response will be published following a 72 hour period after it is sent electronically to you or five business days in the case where records are mailed to you. It is the goal to have the response posted to the Office of Public Engagement's website within one business day following the applicable period of time. Please note that requests for personal information will not be posted online.

If you have any further questions, I can be reached by telephone at (709) 729-1589 or by e-mail at nicolerowsell@gov.nl.ca.

Sincerely,

NICOLE ROWSELL  
Departmental ATIPP Coordinator
Baxter Drover, Town Clerk/Administrator  
Town of Upper Island Cove  
PO Box 149  
Upper Island Cove NL  A0A 4E0 

Dear Mr. Drover: 

Re: Permit to Operate a Water Distribution System – Permit No. OP-WD-04-0025

Permits to Operate Water Distribution Systems were issued to municipalities starting in 2003. These Permits are intended to focus attention on proactive operation and maintenance activities that will ensure a more efficient and reliable water system delivery of the highest water quality and to extend system life. It is important that system operators comply with the minimum requirements set out in the Permit.

As a follow-up to the issuance of the Permits, we are requesting that your municipality review their system operation, complete the attached form, and return it to the address below by March 31, 2007. We would ask that you respond to the questions to the best of your ability in consultation with your system operators and to provide comment as you deem appropriate. This will enable us to gauge progress regarding compliance with the Permits issued to date and to target areas of concern.

Please do not hesitate to contact this office at 729-2558 if you have any questions.

Yours truly, 

Ron Goulding  
Design Approval Specialist
MAINTENANCE ASSURANCE  
MUNICIPAL ADMINISTRATOR'S COMPLIANCE STATEMENT

Municipality: Upper...  
Period: January 1, 2006 To: December 31, 2006

Indicate which statements are true for the reporting period. For any "No" response, provide a separate report and attach to this report. "No" response reports should clearly state problems, suspected causes, corrective action taken and date system was repaired. If problem remains unresolved at time of this report, provide explanation and expected time frame for rectifying the problem.

<table>
<thead>
<tr>
<th>Statement</th>
<th>N/A</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Have reviewed Permit to Operate with employees &amp; provided copies</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Visual inspection done of watershed boundary</td>
<td></td>
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<tr>
<td>3. Watershed signage inspected and missing signage replaced</td>
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<tr>
<td>4. Any security / vandalism problems</td>
<td></td>
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<tr>
<td>5. Intake inspected and cleaned</td>
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<tr>
<td>6. Intake screen cleaned regularly</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Well head seal inspected (if applicable)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Pumping equipment working properly (if applicable)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Flow metering equipment working properly</td>
<td></td>
<td></td>
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<tr>
<td>10. Treatment equipment working properly</td>
<td></td>
<td></td>
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<tr>
<td>11. Chlorine residual checked daily</td>
<td></td>
<td></td>
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<tr>
<td>12. Water main flushing done in the distribution piping system</td>
<td></td>
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<tr>
<td>13. Leak detection survey undertaken during reporting period</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>14. Valve Exercising Program conducted during period</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>15. Boil water advisory issued</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16. All known leaks repaired</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17. All outstanding operational issues resolved</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18. Water distribution system being operated in compliance with Department of Environment &amp; Conservation Permit to Operate.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Town Clerk/Manager: [Signature]  
Date: March 14, 2007

Date Reviewed by Council: March 14, 2007

Mayor: [Signature]
Mr. Baxter Driver, Town Clerk
Town of Upper Island Cove
PO Box 149
Upper Island Cove N.L. A0A 4EO

Re: DRAFT - Permit to Operate a Wastewater Collection System

Dear Sir:

Attached is a draft of the Permit to Operate for the town’s wastewater collection system. This is a continuation of the Department of Environment and Conservation’s implementation in the manner in which Permits are issued for Water and/or Sewage works. The town presently has a Permit to Operate for its water distribution system which outlines the ongoing operation and maintenance requirements of the water system, so similarly this permit will outline the ongoing operation and maintenance requirements of operating the sewage collection system.

The permit will refer to a Classification which is used by the Association of Boards of Certification to ensure standardization with other provinces (e.g., Wastewater Collection System, Class II). The wastewater collection system is classified solely on population served.

Could you please review this in conjunction with Council and other appropriate town officials. I would like to hear back from the town within a month or so on whether they have any concerns or comments with the permit or if it is acceptable as drafted.

If there are any questions, I can be contacted at 729-2558.

Yours truly,

[Signature]

Ron Goulding
Design Approval Specialist
PERMIT TO OPERATE
Permit No. OP-WWC-08-025
File No: 844.021.1-OPWWC

Pursuant to Section 38 of the Water Resources Act, S.N.L. 2002 cW-4.01, this Permit to Operate is hereby issued to:

The Town of Upper Island Cove

for operation of a: Class II Wastewater Collection System

Name of Owner: Town of Upper Island Cove

Address of Owner: PO Box 149
Upper Island Cove NL A0A 4E0
(709) 589-2503 (Tel)
(709) 589-2522 (Fax)

Attention: Mr. Baxter Drover, Town Clerk

Conditions of Permit: As per Appendix “A”

Valid from: January 11, 2008

This Permit is subject to the terms and conditions indicated in Appendix A (attached). This permit is valid until there is a change in the classification of the wastewater collection system or as may be determined by this Department.

Failure to comply with the terms and conditions will render this permit null and void, place the proponent and their agent(s) in violation of the Water Resources Act and make the proponent responsible for taking any remedial measures as may be prescribed by this Department.

not valid without seal

MINISTER
Experience has shown that inadequately operated and maintained wastewater collection systems are actually more costly than a systematic and proactive schedule for appropriate and timely operation and maintenance activities. In this regard, this Permit to Operate is intended to focus on recommended best practice and specific activities and functions that are non-inclusive to ensure wastewater collection systems operate at their optimum efficiency, is cost effective, and promotes longevity of system components. Each municipality is expected to customize and tailor their specific operation and maintenance programs to best suit their infrastructure but shall not be less than as may be required in this Permit.

2. The Town of Upper Island Cove shall operate and maintain a wastewater collection system which includes all collection laterals, trunk lines, sewage pumping stations, manholes, chambers, bar screens and racks, grit removal, and other related appurtenances as may be applicable. This system shall be operated in an efficient manner employing proactive and timely operation and maintenance procedures and best industry practice to ensure the collected wastewater is delivered to the wastewater treatment facility or point of discharge in an aerobic condition and meets the requirements of the latest version of the Environmental Control Water and Sewage Regulations, 2003, or as otherwise may be required by this Department.

3. The Town of Upper Island Cove shall ensure that all operators are familiar with the terms and conditions of this Permit.

System Documentation

4. The Town of Upper Island Cove shall maintain complete digital and paper as-built copies of the wastewater collection system including all major infrastructure components and related information. This information shall be provided to this Department upon request.

Operator Training

5. The operator(s) in direct responsible charge shall have Level I wastewater collection certification and all subordinate operators shall participate in training to become certified at Level I, if not already, at the earliest possible opportunity not to exceed two years from the date of this Permit. The operator in direct responsible charge must achieve Level II certification within two years from the date of this Permit. It is recommended that all operators strive for higher levels of certification as permissible for the system classification (Class II). All operators shall be thoroughly trained in the operation and maintenance of the wastewater collection system, and shall be supplied with all necessary manuals and system documentation. Training of operators shall be ongoing to keep them informed of current operation and maintenance practices.

6. Operator training is an ongoing responsibility of the owner of the wastewater collection system. In this regard, collection system staff must receive a minimum of 24 hours of related training per year. The Town of Upper Island Cove shall ensure that the operators participate in training opportunities offered by this Department and other reputable venues as they arise in order to meet this requirement.
7. An owner's manual must be compiled and made available for viewing by this Department and must include manufacturer's information on all components of the system. The specific information should include supplier, contact information, specification information including shop drawings, model and serial numbers, model, type, size, date installed or date put into service, length of service, parts inventory, and shall be inclusive of all operational and maintenance schedule items including manufacturer's instructions and requirements, inspection log, repair log, replacement log, complaint log, WHMIS, weather reports, system performance reports, wastewater quality data, problems, and other miscellaneous items.

8. The Town of Upper Island Cove shall notify by telephone the Regional Design Approval Specialist at (709) 729-2558 of any condition that results in a major disruption of the normal operation or property damage as a result of surcharging problems. The owner shall submit a written report of any such events within seven days to the Department of Environment and Conservation.

9. The Town of Upper Island Cove shall notify this Department prior to implementing changes to any process that may affect the quality and/or quantity of the discharge.

10. The Town of Upper Island Cove is advised that in the event of an emergency which prevents compliance with a requirement of this Permit to Operate, that requirement will be suspended for such time as the emergency continues or until otherwise directed by the Department provided that:
   a) Due diligence was exercised in relation to the process, operation or event which caused the emergency and that the emergency occurred notwithstanding this exercise of due diligence;
   b) This Department is immediately notified of the emergency; and
   c) It can be demonstrated that every thing possible is being done to restore compliance in the shortest possible time.

11. The Town of Upper Island Cove is not authorized to use any chemicals in the wastewater collection system for cleaning, pre-treating, conditioning, or other related purposes. Application must be made to this Department in this regard.

12. The Town of Upper Island Cove shall ensure that components of the wastewater collection system that require periodic monitoring or maintenance shall be accessible year-round.

13. The Town of Upper Island Cove shall ensure that pertinent and related infrastructure on the system is secure from all unauthorized intrusions and shall maintain adequate security defenses such as facility surveillance, adequate fencing and gates and other measures as may be deemed necessary to prevent vandalism and unauthorized entry.
14. The Town of Upper Island Cove shall maintain a sufficient inventory of spare parts for the most critical components of the system equipment in order to keep down time on the wastewater collection system to a minimum.

**Personal Protective Equipment**

15. The Town of Upper Island Cove shall ensure that all self-contained breathing apparatus is maintained as per Section 10.5.3.2 of the CSA Standard Z94.4-93 “Selection, Use and Care of Respirators”. This Section states “those air cylinders which have not been used in any three month period should be slowly depressurized and recharged with clean, dry, respirable air”. The operator(s) must be trained in the use of the breathing apparatus.

16. The Town of Upper Island Cove shall ensure that the operator(s) are provided with all the safety clothing and equipment required to protect them from contact with sewage, dangerous chemicals and physical hazards such as confined space entry, etc. In this regard, the Town of Upper Island Cove shall ensure that its operator(s) are provided with appropriate equipment and training as per the Occupational Health and Safety Act and its Regulations with regard to confined space entry into sewage pumping stations, manholes, and other spaces that by definition are considered confined.

17. The Town of Upper Island Cove shall provide the operator(s) with access to suitable facilities for sanitation such as hand washing, showering and shall provide disinfecting soap and air dry or towel amenities. Provision shall also be made for the laundering of soiled work clothes and operators shall be encouraged to keep work clothes at the work facility and discouraged from bringing soiled work clothes home for laundering.

**Safety**

18. The Town of Upper Island Cove shall ensure that all safety precautions are taken with regard to worker safety and the safety of others. Facilities such as handrails, guards, gas detectors, first aid equipment, emergency lighting etc. are to be provided as required and maintained and kept in good working order. Every precaution shall be exercised pertaining to routine maintenance operations including overhead and buried power hazards, traffic warning signage and vehicle safety requirements, trench safety, and confined space entry, for example, as per requirements established by the Occupational Health and Safety Branch.

19. Operators shall be instructed to follow established procedures for entering confined spaces and hazardous work areas including companion workers, plans to follow in the event of problems, initial and continuous air monitoring for hazardous and toxic gases, oxygen depletion, and explosive gases, safety harness, appropriate traffic control, means of communications, etc.

**System Maintenance**

20. Fully trained and certified operator(s) shall be assigned to ensure efficient operation and maintenance of the wastewater collection system. The entire wastewater collection system shall be flushed and cleaned at least on an annual basis or more frequently as may be deemed necessary. Caution is advised where potential backflow may result and, in particular, for sections with flat grades, limited flow capacity, and at inter-tidal zones. The use of appropriate tools such as sewer jets and other scouring equipment may be necessary to accomplish an effective cleaning of the system.
21. During the flushing and cleaning operation, it is recommended that the wastewater collection system including all main lines, manholes, chambers, sumps, vents, overflows, and outfalls be examined for deterioration, potential blockages, root intrusion, excessive sediment and grease buildup, and storm water infiltration. The use of visual and optical inspection and monitoring equipment such as video cameras is recommended for this operation.

22. The Town of Upper Island Cove is urged to initiate a program to minimize storm water infiltration by repairing leaky pipes and manholes, provide separate storm water systems where possible, eliminate storm water overflows into the sanitary system as well as sanitary overflows into the storm water system, and deter extraneous connections such as weeping tile drains, roof drains, unnecessary cooling system water, and other types of commercial or industrial process waters.

23. The Town of Upper Island Cove must require new service line connections to the system to be inspected and approved before being buried and put into service. Where storm sewer and sanitary sewer service laterals are installed caution shall be used to prevent possible cross-connections.

24. The Town of Upper Island Cove is urged to implement a public relations program that focuses on water conservation and wastewater generation reduction programs such as promoting low or restricted water flow fixtures, water reuse, drip repair, weeping tile systems instead of sump pumps, frost protection insulation instead of running taps, etc. As part of this promotion, it is recommended that an inspection program be initiated starting with commercial and public buildings to eliminate water waste and reduce wastewater generation by eliminating constant flush urinal fixtures, dripping faucets, roof drains, unnecessary lawn and garden watering by auto-timed systems especially during wet weather, and promote water reuse where possible, rain barrel collection, etc.

Sewage Pumping Stations

25. The Town of Upper Island Cove shall establish a preventative maintenance program for all sewage pumping stations that includes manufacturer’s instructions and requirements, operation and maintenance items specific to each station, and pertinent items related to past knowledge of the collection zone. The maintenance program shall establish specific items and time schedules and shall ensure that the functions are completed on time and in the same manner by all operators, and reviewed by supervisory staff. All sewage pumping stations must be monitored and inspected daily to ensure all components are functioning properly.

26. The Town of Upper Island Cove shall ensure that all components of sewage pumping stations such as wet wells, venting systems, control systems, auxiliary power sources, switches, alarms, pumps (including standby pumps), check valves, forcemain appurtenances, and related equipment are maintained and kept in good working order at all times, to prevent the overflow of wastewater, property damage, cleanup cost, and, undesirable impact on the environment.

27. The operator(s) shall record any shutdown and/or by-passing of a sewage pumping station and Council shall submit a written report of such events to the Regional Design Approval Specialist.

28. Contingency plans must be established for mechanical and electrical failure. All back-up components shall be exercised and kept duty ready at all times. For sewage pumping stations that do not have adequate storage to permit response time, they must be equipped with committed auxiliary equipment or additional storage capacity.
29. The Town of Upper Island Cove shall endeavour to eliminate all overflows related to capacity problems during peak flow periods. The continuation of overflows on a regular basis is unacceptable and must be corrected.

Analytical Requirements

30. The Town of Upper Island Cove shall ensure that all monitoring equipment is maintained and calibrated in accordance with manufacturers’ recommendations.

Records

31. The Town of Upper Island Cove shall maintain all records relevant to the operation and maintenance of this facility for a minimum of 5 years.

32. All aspects related to the operation of the wastewater collection system must be documented and made available to Department of Environment and Conservation Officials upon request.

Hydrocarbon and Hazardous Waste Disposal

33. The Town of Upper Island Cove shall ensure that all used oil products and other related hazardous wastes generated by the machinery used in the operation of the wastewater collection system are collected and disposed of at an approved site. The regional office of the Department of Government Services shall be contacted in this regard.

Asbestos - Cement Pipe

34. The Town of Upper Island Cove shall ensure that when dealing with asbestos cement pipe, any removal, handling or transport and disposal of asbestos is carried out in accordance with the Asbestos Abatement Regulations 1998 under The Occupational Health and Safety Act. For further information contact (709) 729-3130.

Operator's Daily Log/Journal

35. An operator's daily log of activities shall be maintained including items of interest such as maintenance checks, recorded problems, repairs, etc., must be kept and made available to the Department of Environment and Conservation upon request.

Planning

36. The Town of Upper Island Cove shall establish long and short term plans for system operation, improvement, expansion, and replacement and shall incorporate sound fiscal planning for all operational aspects of the system including general maintenance and operation, emergencies, operator training and continuing education, and capital fiscal planning for upgrading, expansion, and replacement as and when needed.
GOVERNMENT OF NEWFOUNDLAND AND LABRADOR
Department of Environment and Conservation

Permit No. OP-WWC-08-025
APPENDIX A

Page 7 of 7

cc: Mr. Randy Dillon, P.Eng.
Department of Municipal Affairs
Engineering and Land Use Planning Division
PO Box 8700
St. John's NL A1B 4J6

cc: Mr. Frank Huxter, P.Eng.
Department of Municipal Affairs
Eastern Regional Division
Municipal Support and Policy Branch
PO Box 8700
St. John's NL A1B 4J6

cc: Mr. Calvin Adams, Regional Manager
Department of Government Services
Regional Government Service Centre
PO Box 512
Harbour Grace NL A0A 2M0

cc: Mr. Hasen Khan, P.Eng.
Department of Environment and Conservation
Water Resources Management Division
PO Box 8700
St. John's NL A1B 4J6

cc: Mr. Ron Goulding
Design Approval Specialist
Department of Environment and Conservation
Water Resources Management Division
PO Box 8700
St. John's NL A1B 4J6
Dorothy,

As discussed here is what I sent to the town back in March 2008. Any questions or comments, please let me know.

Thanks,

Ron Goulding
Design Approval Specialist
Mr. Baxter Drover, Town Clerk/Manager  
Town of Upper Island Cove  
PO Box 149  
Upper Island Cove NL A6A 4E0  

Re: Permit to Operate a Wastewater Collection System

Dear Sir:

In response to your letter of February 28, 2008 regarding the above, let me first say we appreciate council's response. This Department is not a funding agency, but do appreciate the fact that council has limited financial resources. The intent of the permit is not to create a financial hardship on towns but to try and get towns to recognize the importance of operating and maintaining their sewage collection systems and what are some of the key requirements in doing this.

We all recognize the fact that proper operation and maintenance of a sewage collection system including all of its components will save the town money in the end by extending the life of the system. It will also minimize malfunctioning of the system which could create environmental and health issues.

This Department does not expect the town to immediately implement all of the requirements of the permit and therefore are willing to work with council over time to try and achieve the goals of the permit. From your letter, it appears that council is in general agreement with the permit, but do have a number of concerns with it. I will try and address these as follows:

Operator Training - Please be advised, similar to past training done for water distribution, classroom courses will be offered in your area for wastewater collection this year. Your town will be notified regarding this training. Also, this Department has a mobile training unit in which the trainer is more than willing to come to your town to spend time doing onsite training with your operators. All of this training will be at no cost to the town except what it costs to cover operator wages and travel, if required. We will not be expecting full compliance with the operator training requirement until such time as this Department has carried out or provided adequate training for the operators.

Security - If council feels that existing components are secure from vandalism etc., then we will not expect council to spend money on this item.

Personal Protective Equipment - The town must maintain their self contained breathing apparatuses and should have operators that are responsible for dealing with hazardous material such as chlorine gas trained in the use of a SCBA. This department should be able to provide training to the operator in this area or advise the town where to obtain such training.

In regards to the town providing laundering service for its employees, the intent here is for the town to be aware and advise employees that heavily soiled (e.g. sewage related) work clothes should not be worn home, but changed in the work place. Outside laundering services where possible should be used.
I hope I have addressed council's concerns and again would like to emphasize that it is not this Department's intent to create a financial hardship on the town but to work with council over time to try and achieve the goals of the permit. If you have any other questions regarding this, I can be reached at 729-2558.

Yours truly,

[Signature]
Ron Goulding
Water and Wastewater Specialist
February 28, 2008

Department of Environment & Conservation
Water Resources Management Division
P.O. Box 8700
St. John's, NL
A1B 4J6

Attention: Mr. Ron Goulding
Design Approval Specialist

Dear Sir:

Re: Permit to operate a Wastewater Collection System.

Upon receiving the draft copy of the terms and conditions for a permit to operate a Wastewater Collection System, copies were submitted to the mayor and each councillor for their perusal and comments.

At its meeting February 25, 2008, Council held discussion on the draft copy for a permit to operate a Wastewater Collection System.

The Council agrees that the Wastewater Collection System has to be maintained. However, in doing so, it's going to be very costly to operate under the terms and conditions as indicated in Appendix A.

Therefore, Council agreed that in order to implement these terms and conditions as indicated in Appendix A of the draft permit copy, some financial assistance should be provided on an annual basis in order to offset some of the financial cost to Council.
Some financial cost that Council would have some concerns with are:

1. Operator Training Cost for certification for Level I and then to Level II, along with ongoing training pertaining to current operation and maintenance.

2. Security cost in securing the defenses of the facilities, fencing, gates, etc. to prevent vandalism.

3. Protective and Safety Equipment is very costly to put in place and maintain on a regular basis - putting in place suitable facilities for sanitation and provisions for the laundering of soiled work clothes.

There are others in your terms and conditions that are cost affected, and which could be a financial burden to the Town to implement.

Therefore, before Council puts its stamp of approval on acceptance of your draft conditions and terms for a permit to operate a Wastewater Collection System, a financial plan should be put in place to help offset the cost in implementing the permit as drafted.

Town Council
Upper Island Cove

Per: Baxter Drover,
Town Clerk/Manager
Pursuant to Section 38 of the Water Resources Act, SNL 2002 cW-4.01, this Permit to Operate is hereby issued to:

The Town of Upper Island Cove

for operation of a: Class II Wastewater Collection System

Name of Owner: Town of Upper Island Cove

Address of Owner: PO Box 149
Upper Island Cove NL A0A 4E0
(709) 589-2503 (Tel.)
(709) 589-2522 (Fax.)

Attention: Mr. Baxter Drover, Town Clerk

Conditions of Permit: As per Appendix "A"

Valid from: January 26, 2009

This Permit is subject to the terms and conditions indicated in Appendix A (attached). This permit is valid until there is a change in the classification of the wastewater collection system or as may be determined by this Department.

Failure to comply with the terms and conditions will render this permit null and void, place the proponent and their agent(s) in violation of the Water Resources Act and make the proponent responsible for taking any remedial measures as may be prescribed by this Department.

MINISTER
General

1. Experience has shown that inadequately operated and maintained wastewater collection systems are actually more costly than a systematic and proactive schedule for appropriate and timely operation and maintenance activities. In this regard, this Permit to Operate is intended to focus on recommended best practice and specific activities and functions that are non-inclusive to ensure wastewater collection systems operate at their optimum efficiency, is cost effective, and promotes longevity of system components. Each municipality is expected to customize and tailor their specific operation and maintenance programs to best suit their infrastructure but shall not be less than as may be required in this Permit.

2. The Town shall operate and maintain a wastewater collection system which includes all collection laterals, trunk lines, sewage pumping stations, manholes, chambers, bar screens and racks, grit removal, and other related appurtenances as may be applicable. This system shall be operated in an efficient manner employing proactive and timely operation and maintenance procedures and best industry practice to ensure the collected wastewater is delivered to the wastewater treatment facility or point of discharge in an aerobic condition and meets the requirements of the latest version of the Environmental Control Water and Sewage Regulations, 2003, or as otherwise may be required by this Department.

3. The Town shall ensure that all operators are familiar with the terms and conditions of this Permit.

System Documentation

4. The Town from the date of this permit shall maintain complete digital and paper as-built copies of the wastewater collection system including all major infrastructure components and related information. This information shall be provided to this Department upon request.

Operator Training

5. The operator(s) in direct responsible charge shall have Level I wastewater collection certification and all subordinate operators shall participate in training to become certified at Level I, if not already, at the earliest possible opportunity not to exceed two years from the date of this Permit. The operator in direct responsible charge must achieve Level II certification within two years from the date of this Permit. It is recommended that all operators strive for higher levels of certification as permissible for the system classification (Class II). All operators shall be thoroughly trained in the operation and maintenance of the wastewater collection system, and shall be supplied with all necessary manuals and system documentation. Training of operators shall be ongoing to keep them informed of current operation and maintenance practices.

6. Operator training is an ongoing responsibility of the owner of the wastewater collection system. In this regard, collection system staff must receive a minimum of 24 hours of related training per year. The Town shall ensure that the operators participate in training opportunities offered by this Department and other reputable venues as they arise in order to meet this requirement.
GOVERNMENT OF NEWFOUNDLAND AND LABRADOR
Department of Environment and Conservation

Permit No. OP-WWC-09-025  APPENDIX A  Page 3 of 7

Owner’s Manual

7. An owner’s manual must be compiled and made available for viewing by this Department and must include manufacturer’s information on all components of the system. The specific information should include supplier, contact information, specification information including shop drawings, model and serial numbers, model, type, size, date installed or date put into service, length of service, parts inventory, and shall be inclusive of all operational and maintenance schedule items including manufacturer’s instructions and requirements, inspection log, repair log, replacement log, complaints log, WHMIS, weather reports, system performance reports, wastewater quality data, problems, and other miscellaneous items.

Adverse Event Notification

8. The Town shall notify by telephone the Regional Design Approval Specialist at (709) 729-2558 of any condition that results in a major disruption of the normal operation or property damage as a result of surcharging problems. The owner shall submit a written report of any such events within seven days to the Department of Environment and Conservation.

9. The Town shall notify this Department prior to implementing changes to any process that may affect the quality and/or quantity of the discharge.

Emergency

10. The Town is advised that in the event of an emergency which prevents compliance with a requirement of this Permit to Operate, that requirement will be suspended for such time as the emergency continues or until otherwise directed by the Department provided that:

   a) Due diligence was exercised in relation to the process, operation or event which caused the emergency and that the emergency occurred notwithstanding this exercise of due diligence;
   b) This Department is immediately notified of the emergency; and
   c) It can be demonstrated that every thing possible is being done to restore compliance in the shortest possible time.

Process Chemicals

11. The Town is not authorized to use any chemicals in the wastewater collection system for cleaning, pretreating, conditioning, or other related purpose. Application must be made to this Department in this regard.

Accessibility

12. The Town shall ensure that components of the wastewater collection system that require periodic monitoring or maintenance shall be accessible year-round.

Security

13. The Town shall ensure that pertinent and related infrastructure on the system is secure from all unauthorized intrusions and shall maintain adequate security defenses such as facility surveillance, adequate fencing and gates and other measures as may be deemed necessary to prevent vandalism and unauthorized entry.
14. The Town shall maintain a sufficient inventory of spare parts for the most critical components of the system equipment in order to keep down time on the wastewater collection system to a minimum.

Personal Protective Equipment

15. The Town shall ensure that all self-contained breathing apparatus is maintained as per Section 10.5.3.2 of the CSA Standard Z94.4-93 “Selection, Use and Care of Respirators”. This Section states “those air cylinders which have not been used in any three month period should be slowly depressurized and recharged with clean, dry, respirable air”. The operator(s) must be trained in the use of the breathing apparatus.

16. The Town shall ensure that the operator(s) are provided with all the safety clothing and equipment required to protect them from contact with sewage, dangerous chemicals and physical hazards such as confined space entry, etc. In this regard, the Town shall ensure that its operator(s) are provided with appropriate equipment and training as per the Occupational Health and Safety Act and its Regulations with regard to confined space entry into sewage pumping stations, manholes, and other spaces that by definition are considered confined.

17. The Town shall provide the operator(s) with access to suitable facilities for sanitation such as hand washing, showering and shall provide disinfecting soap and air dry or towel amenities. Provision should also be made for the laundering of soiled work clothes and operators shall be encouraged to keep work clothes at the work facility and discouraged from bringing soiled work clothes home for laundering.

Safety

18. The Town shall ensure that all safety precautions are taken with regard to worker safety and the safety of others. Facilities such as handrails, guards, gas detectors, first aid equipment, emergency lighting etc. are to be provided as required and maintained and kept in good working order. Every precaution shall be exercised pertaining to routine maintenance operations including overhead and buried power hazards, traffic warning signage and vehicle safety requirements, trench safety, and confined space entry, for example, as per requirements established by the Occupational Health and Safety Branch.

19. Operators shall be instructed to follow established procedures for entering confined spaces and hazardous work areas including companion workers, plans to follow in the event of problems, initial and continuous air monitoring for hazardous and toxic gases, oxygen depletion, and explosive gases, safety harness, appropriate traffic control, means of communications, etc.

System Maintenance

20. Fully trained and certified operator(s) shall be assigned to ensure efficient operation and maintenance of the wastewater collection system. Problem areas of the wastewater collection system shall be flushed and cleaned at least on an annual basis or more frequently as may be deemed necessary. Caution is advised where potential backflow may result and, in particular, for sections with flat grades, limited flow capacity, and at inter-tidal zones. The use of appropriate tools such as sewer jets and other scouring equipment may be necessary to accomplish an effective cleaning of the system.
21. During the flushing and cleaning operation, it is recommended that the wastewater collection system including all main lines, manholes, chambers, sumps, vents, overflows, and outfalls be examined for deterioration, potential blockages, root intrusion, excessive sediment and grease buildup, and storm water infiltration. The use of visual and optical inspection and monitoring equipment such as video cameras is recommended for this operation.

22. The Town is urged to initiate a program to minimize storm water infiltration by repairing leaky pipes and manholes, provide separate storm water systems where possible, eliminate storm water overflows into the sanitary system as well as sanitary overflows into the storm water system, and deter extraneous connections such as weeping tile drains, roof drains, unnecessary cooling system water, and other types of commercial or industrial process waters.

23. The Town must require new service line connections to the system to be inspected and approved before being buried and put into service. Where storm sewer and sanitary sewer service laterals are installed caution shall be used to prevent possible cross-connections.

24. The Town is urged to implement a public relations program that focuses on water conservation and wastewater generation reduction programs such as promoting low or restricted water flow fixtures, water reuse, drip repair, weeping tile systems instead of sump pumps, frost protection insulation instead of running taps, etc. As part of this promotion, it is recommended that an inspection program be initiated starting with commercial and public buildings to eliminate water waste and reduce wastewater generation by eliminating constant flush urinal fixtures, dripping faucets, roof drains, unnecessary lawn and garden watering by auto-timed systems especially during wet weather, and promote water reuse where possible, rain barrel collection, etc.

### Sewage Pumping Stations

25. The Town shall establish a preventative maintenance program for all sewage pumping stations that includes manufacturer's instructions and requirements, operation and maintenance items specific to each station, and pertinent items related to past knowledge of the collection zone. The maintenance program shall establish specific items and time schedules and shall ensure that the functions are completed on time and in the same manner by all operators, and reviewed by supervisory staff. All sewage pumping stations must be monitored and inspected on a regular basis to ensure all components are functioning properly.

26. The Town shall ensure that all components of sewage pumping stations such as wet wells, venting systems, control systems, auxiliary power sources, switches, alarms, pumps (including standby pumps), check valves, forecein appurtenances, and related equipment are maintained and kept in good working order at all times, to prevent the overflow of wastewater, property damage, cleanup cost, and, undesirable impact on the environment.

27. The operator(s) shall record any shutdown and/or by-passing of a sewage pumping station and Council shall submit a written report of such events to the Regional Design Approval Specialist.

28. Contingency plans must be established for mechanical and electrical failure. All back-up components shall be exercised and kept duty ready at all times. For sewage pumping stations that do not have adequate storage to permit response time, they must be equipped with committed auxiliary equipment or additional storage capacity.
29. The Town shall endeavour to eliminate all overflows related to capacity problems during peak flow periods. The continuation of overflows on a regular basis is unacceptable and must be corrected.

Analytical Requirements

30. The Town shall ensure that all monitoring equipment is maintained and calibrated in accordance with manufacturers' recommendations.

Records

31. The Town shall maintain all records relevant to the operation and maintenance of this facility for a minimum of 5 years.

32. All aspects related to the operation of the wastewater collection system must be documented and made available to Department of Environment and Conservation Officials upon request.

Hydrocarbon and Hazardous Waste Disposal

33. The Town shall ensure that all used oil products and other related hazardous wastes generated by the machinery used in the operation of the wastewater collection system are collected and disposed of at an approved site. The regional office of the Department of Government Services shall be contacted in this regard.

Asbestos - Cement Pipe

34. The Town shall ensure that when dealing with asbestos cement pipe, any removal, handling or transport and disposal of asbestos is carried out in accordance with the Asbestos Abatement Regulations 1998 under The Occupational Health and Safety Act. For further information contact (709) 729-3130.

Operator's Daily Log/Journal

35. An operator's daily log of activities shall be maintained including items of interest such as maintenance checks, recorded problems, repairs, etc., must be kept and made available to the Department of Environment and Conservation upon request.

Planning

36. The Town shall establish long and short term plans for system operation, improvement, expansion, and replacement and shall incorporate sound fiscal planning for all operational aspects of the system including general maintenance and operation, emergencies, operator training and continuing education, and capital fiscal planning for upgrading, expansion, and replacement as and when needed.
cc: Mr. Randy Dillon, P.Eng.
Department of Municipal Affairs
Engineering and Land Use Planning Division
PO Box 8700
St. John's NL A1B 4J6

cc: Mr. John Dawe, P. Eng.
Department of Municipal Affairs
Municipal Support and Policy Branch
PO Box 8700
St. John's NL A1B 4J6

cc: Mr. Calvin Adams, Regional Manager
Department of Government Services
Regional Government Service Centre
PO Box 512
Harbour Grace NL A0A 2M0

cc: Mr. Haseen Khan, P. Eng.
Department of Environment and Conservation
Water Resources Management Division
PO Box 8700
St. John's NL A1B 4J6

cc: Mr. Ron Goulding
Design Approval Specialist
Department of Environment and Conservation
Water Resources Management Division
PO Box 8700
St. John's NL A1B 4J6
Keith, Debi L

From: Spracklin, Deneen
To: Keith, Debi L
Sent: Tuesday, September 15, 2009 10:22 AM
Subject: Fall 2009 Operator Education Seminar - Bay Roberts

Fall 2009 Operator Education Seminar
Water Quality Issues

The Operator Education, Training and Certification Section will be holding a Water Quality Issues seminar during the Fall 2009 season. There is no fee to attend this seminar however all travel associated costs, including meals, will be the responsibility of the attendee. Please email dspracklin@gov.nl.ca to confirm your attendance. Details for this seminar are as follows:

Water Quality Issues
Bay Roberts
Certification Exam – Water Distribution

Please note, if any operators are interested in writing their Water Distribution Certification Exam, they must notify Deneen Spracklin at (709)729-1158, fax (709)729-0320, or by email at dspracklin@gov.nl.ca prior to writing the exam. An application form may need to be submitted before an operator will be eligible to write the exam. The fee to write the certification exam is $50.00 and must be made payable to ACWWVCB. Details for the certification exam are as follows:

Certification Exam
Bay Roberts
Klondyke Hotel
October 2, 2009
8:30 am – 12:30 pm

More seminars for Fall 2009 to be announced

Deneen Spracklin, P.Eng.
Coordinator, Operator Education
Operator Education, Training and Certification Section
Water Resources Management Division
Department of Environment and Conservation
PO Box 8700
St. John's NL A1B 4J6
Ph: (709) 729-1158
Fax: (709) 729-0320
dspracklin@gov.nl.ca
Please find attached the Fall 2009 Operator Education Seminar Schedule. If you have any trouble viewing this document, please let me know.

Deneen Spracklin, P.Eng.
Coordinator, Operator Education
Operator Education, Training and Certification Section
Water Resources Management Division
Department of Environment and Conservation
PO Box 8700
St. John’s NL A1B 4J6
Ph: (709) 729-1158
Fax: (709) 729-0320
Fall 2009 Operator Education Seminars
Scheduled Locations and Dates

The Fall 2009 Operator Education Seminar Schedule has been finalized for the Eastern and Central Regions. Please refer to the following table for information pertaining to seminar topics, locations, dates, and times. Operators, municipal staff, municipal officials, government personnel, and other interested water professionals are welcome to attend. These seminars are not limited to new operators, and interested persons may attend any seminar that is convenient in terms of either date or location.

There is no fee associated with the seminars; however all associated travel costs, including meals, are not included.

<table>
<thead>
<tr>
<th>Location</th>
<th>Date</th>
<th>Time</th>
<th>Topic</th>
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<tbody>
<tr>
<td>Bay Roberts</td>
<td>Oct. 1, 2009</td>
<td>8:30 – 4:30</td>
<td>Water Quality Issues</td>
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<tr>
<td>Klondyke Hotel</td>
<td>Oct. 2, 2009</td>
<td>8:30 – 12:00</td>
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<td>Harbour Breton</td>
<td>Oct. 6, 2009</td>
<td>8:30 – 4:30</td>
<td>Water Quality Issues</td>
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<td>Town Hall</td>
<td>Oct. 7, 2009</td>
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<td>Placentia</td>
<td>Oct. 22, 2009</td>
<td>1:00 – 4:30</td>
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<td>The Greystone</td>
<td>Nov 3, 2009</td>
<td>8:30 – 4:30</td>
<td>Water Distribution Basics</td>
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<td></td>
<td>Nov 4, 2009</td>
<td>8:30 – 4:30</td>
<td>Water System Hydraulics</td>
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<td></td>
<td>Nov 5, 2009</td>
<td>8:30 – 4:30</td>
<td>Water Quality Issues</td>
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<tr>
<td></td>
<td>Nov 6, 2009</td>
<td>8:30 – 12:00</td>
<td>Certification Exam</td>
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<tr>
<td>Grand Falls-Windsor</td>
<td>Dec. 1, 2009</td>
<td>8:30 – 4:30</td>
<td>Water Distribution Basics</td>
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<tr>
<td>Robin Hood Hotel</td>
<td>Dec. 2, 2009</td>
<td>8:30 – 4:30</td>
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<td>8:30 – 12:00</td>
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<td>Ramada Hotel</td>
<td>Dec. 9, 2009</td>
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<td>Gander</td>
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<td>Sinbad’s Hotel</td>
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<td>Clarenville</td>
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<tr>
<td>St. Jude Hotel</td>
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**In order to plan for space, handout materials, etc., please advise me by fax (709-729-0320) or email (dspracklin@gov.nl.ca) if you plan on attending any of the above noted seminars or certification exams.

**If you are interested in writing a Certification Exam, you must contact Deneen Spracklin prior to the exam. Operators writing the exam MUST meet qualifications and MUST have
submitted an Application for Certification. An operator will not be able to show up the week of the exam and decide to write. The fee for the certification exam is $50.00 and the cheque must be made payable to ACWWVCB.

If you have any questions regarding the Fall 2009 Seminar Schedule or the OETC Program in general, please contact the following.

Deneen Spracklin, P.Eng.
Coordinator, Operator Education
Department of Environment & Conservation
PO Box 8700
St. John's NL A1B 4J6
Phone: (709)729-1158
Fax: (709)729-0320
dspracklin@gov.nl.ca
I am forwarding this message as a favour to the ACWWA. If you require any further information, please contact Clara Shea at (902)434-6002 or at acwwa@hfx.andara.com

Attached is a description of a workshop the ACWWA are hoping to organize. The 2-day workshop is titled "Water Loss Management, Water Efficiency and More – Methods, Results, Tips". There is a cost associated with registering for this course. However, the exact cost is not known at this time. Once they have an idea of the number of people interested in attending, they will calculate the registration fee. An exact location for the workshop has not been decided, but I'm assuming they will probably hold it in St. John's. If you are interested in attending this course, please let Clara at ACWWA know as soon as possible. If they don't have enough people interested, they will cancel the workshop.

Deneen Spracklin, P.Eng.
Coordinator, Operator Education
Operator Education, Training and Certification Section
Water Resources Management Division
Department of Environment and Conservation
PO Box 8700
St. John's NL A1B 4J6
Ph: (709) 729-1158
Fax: (709) 729-0320
dspracklin@gov.nl.ca
Newfoundland Two Day Workshop

“Water Loss Management, Water Efficiency and More
- Methods, Results, Tips”

Workshop Description

Water resources are precious, and water loss management and water use efficiency can provide benefits to your utility, your customer and the environment. The workshop will provide practical, hands on information for small to medium utility staff, to enable them to design and implement water loss management and water efficiency programs and other related practices.

All participants will be given the chance to discuss “the opportunities for”, and “barriers to” water efficiency in their utility. Tips and a short list of things to do will be provided, and case studies of successfully implemented programs will be reviewed. Break out sessions will include how to develop District Meter Areas (DMAs), Customer Meter Testing and Changeout, and Source Meter Testing Programs.

Water efficiency can give energy savings for the utility from treatment and pumping reductions, and to their customers through the savings in hot water use. The potential reductions in Greenhouse Gas Emissions from energy reductions will be covered in the workshop.

The workshop will cover:

- Overview of Water Efficiency (*time is right, essential components*)
- Residential and ICI Water Efficiency (*indoor, outdoor, measures, implementation*)
- Education and Communication (*public, school, summer use, ICI*)
- Water Loss Management (*IWA water balance, active leak detection, DMAs*)
- Customer Metering (*Universal metering, meter changeout, AMR systems*)
- Source Metering (*Types of meters, calibration techniques*)
- Water Conservation Rates (*inclining/seasonal/excess use rates, fairness and equity*)
- Monitoring and Evaluation (*methods, frequency, program adjustment*)
- Maintenance (*methods, tracking, reporting*)
- Energy Savings for your Utility and Customer (*treatment and pumping, hot water*)
- Break Out Session - “Opportunities for” and “Barriers to” Water Efficiency at Your Utility
- Break Out Session - Water Efficiency Measures most suited to your Utility
- Hands on Material - Provide Short List to Start Your Program, or Develop It Further
Give Examples of Successfully Implemented Water Efficiency Programs

- **Break Out Session** – Develop District Meter Areas (DMAs) in your utility
- **Break Out Session** – Develop Customer Meter Testing and Meter changeout program in your Utility
- **Break Out session** – Develop a Source Meter Testing Program in your Utility

**Course Format**

Every attempt is made to keep the workshop informal and an enjoyable day-long training experience. Registration starts at 8.30 am on the first day, and the workshop will start shortly after at 9.00 am. Lunch is provided both days, along with refreshment breaks. Though the workshop is non-smoking, ample breaks are provided for coffee and discussion. Come and participate in an informative and interesting two days.

**Presenter:**

**Kingsley Blease, P.Eng.**

**G & M Project Management**

Mr. Blease is a professional engineer with 37 years of experience in water and wastewater projects, in both Canada and the United Kingdom. Kingsley has worked for many years in both the public and private sectors of the Water industry. He has eighteen years experience as manager of water efficiency projects, covering all aspects from study to program design, site audits, installation of devices, monitoring water saved, and analysis of results. Kingsley has considerable experience over the last 25 years with water loss management. In addition, Kingsley has 5 years experience directing water meter Automatic Meter Reading (AMR) projects. He has six years experience operating the water supply system of a major city, including implementing leakage control. Kingsley is currently a member of the Ontario Water Works Association Water Efficiency Committee, and a past chair.

**Cost**

The workshop fee is $****. This includes refreshment breaks, lunch and applicable taxes

**Contact Information**

Registrations can be made by faxing or mailing the registration form on the reverse of this page, or online at *****. For further information, please contact *****

**Course Location**

********
The attached course notification is from ACWWA. If you have any questions regarding this course please contact Clara at acwwa@hfx.andara.com.
Workshop Description:

Water resources are precious, and water loss management and water use efficiency can provide benefits to your utility, your customer and the environment. The workshop will provide practical, hands-on information for small to medium utility staff, to enable them to design and implement water loss management and water efficiency programs and other related practices.

All participants will be given the chance to discuss "the opportunities for", and "barriers to" water efficiency in their utility. Tips and a short list of things to do will be provided, and case studies of successfully implemented programs will be reviewed. Break out sessions will include how to develop District Meter Areas (DMAs), Customer Meter Testing and Changeout, and Source Meter Testing Programs.

Water efficiency can give energy savings for the utility from treatment and pumping reductions, and to their customers through the savings in hot water use. The potential reductions in Greenhouse Gas Emissions from energy reductions will be covered in the workshop.

The workshop will cover:

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- Energy Savings for your Utility and Customer *(treatment and pumping, hot water)*
- **Break Out Session** – "Opportunities for" and "Barriers to" Water Efficiency at Your Utility
- **Break Out Session** – Water Efficiency Measures most suited to your Utility
Hands on Material - Provide Short List to Start Your Program, or Develop It Further

Give Examples of Successfully Implemented Water Efficiency Programs

Break Out Session – Develop District Meter Areas (DMAs) in your utility

Break Out Session – Develop Customer Meter Testing and Meter changeout program in your Utility

Break Out Session – Develop a Source Meter Testing Program in your Utility

Course Format:

Every attempt is made to keep the workshop informal and an enjoyable day-long training experience. Registration starts at 8.30 am, and the workshop will start shortly after at 9:00 am. Lunch is provided and is served from 12.00 – 1.00pm. Wrap up time will be around 4.00 pm. Though all the workshops are non-smoking, ample breaks are provided for coffee and discussion. Come and participate in an informative and interesting day and earn CEUs.

Presenter:

Kingsley Blease, P.Eng.

Mr. Blease is a professional engineer with 37 years of experience in water and wastewater projects, in both Canada and the United Kingdom. Kingsley has worked for many years in both the public and private sectors of the Water industry. He has eighteen years experience as manager of water efficiency projects, covering all aspects from study to program design, site audits, installation of devices, monitoring water saved, and analysis of results. Kingsley has considerable experience over the last 25 years with water loss management. In addition, Kingsley has 5 years experience directing water meter Automatic Meter Reading (AMR) projects. He has six years experience operating the water supply system of a major city, including implementing leakage control. Kingsley is currently a member of the Ontario Water Works Association Water Efficiency Committee, and a past chair.

Cost:

The Seminar fee is $375.00. This includes refreshment breaks, lunch and taxes.

Contact Information:

Registration can be made by faxing or mailing the registration form on the reverse of this page, or on-line at www.acwwa.ca. For further information, please contact ACWWA Section office at 902-434-6002.

Course Location:

Comfort Inn Airport
106 Airport Road
709-753-3500
Please print clearly and fax or mail to the address listed on the bottom of this form.

Please register before December 1, 2009!

I wish to register for the following course:

St. John’s, NL December 8-9, 2009

Name: ____________________________

Organization: ____________________________

Mailing Address: ____________________________

City, Province: ____________________________ Postal Code: __________

Phone: __________ Fax: __________ Email: __________

Payment of $375.00 (includes taxes & lunch) can be made by cheque and is due prior to workshop date.

Cheques should be made payable to
ACWWA
PO Box 41002 Dartmouth, NS B2Y 4P7
Phone 902-434-6002 Fax 902-435-7796
To: Municipal Water System Operators

Department of Municipal Affairs Eastern Region

If you are the operator of a municipal water system, you should have received a letter from Ms. Deneen Spracklin of the Department of Environment and Conservation concerning the annual Clean and Safe Drinking Water Workshop to be held March 23 to 25 in Gander. That letter contained information regarding the subsidy that the Department of Municipal Affairs is offering for the workshop. The workshop will cover topics such as water treatment, water distribution, and water quality monitoring. The deadline for registration is March 15, and the cost of the workshop is $250 per person. Please contact Ms. Spracklin at (709) 754-4251 or deneen.spracklin@eastern.gov for more information.

[Signatures]

March 9, 2010

Keith, Debi L
Affairs can make available to Municipalities or Local service Districts to offset expenses associated with attending the Workshop.

For Eastern Region communities, Mr. Brad Penny was listed as the contact person for your requests for approval of the subsidy. Unfortunately, Brad is currently on an extended absence from work, so we need to make alternate arrangements.

Prior to attending the Workshop, you should request approval of the subsidy by contacting:

Sara Kean
    By e-mail at sarakean@gov.nl.ca
    By fax at 709-729-7491
    By phone at 709-729-5456

After attending the Workshop, you should complete the required claim form and submit it. Sara will remain your point of contact for that as well. Please note that the deadline for receipt of subsidy claims is March 31, 2010.

If you have already submitted a request for approval to Brad, I must ask that you re-submit a copy of it to Sara. I sincerely regret any inconvenience this may cause, but it is necessary to ensure that no requests get missed in the transfer between office locations.

Please let me know if you have any questions or concerns.

John G. Dawe, P. Eng.
Eastern Regional Engineer
Department of Municipal Affairs
709-729-5337
    cell 709-699-2937    fax 709-729-7491
Please find attached the Spring 2010 Operator Seminar Schedule for Eastern and Central region locations. If you have trouble opening this document, please let me know.

Deneen Spracklin, P.Eng.
Coordinator, Operator Education
Operator Education, Training and Certification Section
Water Resources Management Division
Attention: Drinking Water System Operators

The Spring 2010 Operator Education Seminar Schedule has been finalized for the Eastern and Central Regions. **Please refer to the following table for information pertaining to seminar topics, locations, dates, and times.** Operators, municipal staff, municipal officials, government personnel, and other interested water professionals are welcome to attend. These seminars are not limited to new operators, and interested persons may attend any seminar that is convenient in terms of either date or location. There is no fee associated with the seminars; however all associated travel costs, including meals, are not included.

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<tr>
<th>Location</th>
<th>Date</th>
<th>Time</th>
<th>Topic</th>
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<tbody>
<tr>
<td>St. John’s Ramada Hotel</td>
<td>March 30, 2010</td>
<td>8:30 – 4:30</td>
<td>Water Distribution Basics</td>
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<tr>
<td>St. John’s Ramada Hotel</td>
<td>March 31, 2010</td>
<td>8:30 – 4:30</td>
<td>Water System Hydraulics</td>
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<tr>
<td>St. John’s Ramada Hotel</td>
<td>April 1, 2010</td>
<td>8:30 – 4:30</td>
<td>Water Quality Issues</td>
</tr>
<tr>
<td>St. John’s Ramada Hotel</td>
<td>April 5, 2010</td>
<td>8:30 – 12:00</td>
<td>Certification Exam</td>
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<td>Clarenville St. Jude Hotel</td>
<td>April 13, 2010</td>
<td>8:30 – 12:30</td>
<td>Proper Handling of Chlorine &amp; Chlorine Containers</td>
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<td>Marystown Marystown Hotel</td>
<td>April 14, 2010</td>
<td>8:30 – 4:30</td>
<td>Water Quality Issues</td>
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<tr>
<td>Marystown Marystown Hotel</td>
<td>April 15, 2010</td>
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<td>Certification Exam</td>
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<tr>
<td>Bay Roberts Klondyke Hotel</td>
<td>April 21, 2010</td>
<td>12:30 – 4:30</td>
<td>Proper Handling of Chlorine &amp; Chlorine Containers</td>
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<td>Springdale Riverwood Inn</td>
<td>April 27, 2010</td>
<td>8:30 – 12:30</td>
<td>Proper Handling of Chlorine &amp; Chlorine Containers</td>
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<tr>
<td>Grand Falls-Windsor Robin Hood Hotel</td>
<td>April 28, 2010</td>
<td>8:30 – 12:30</td>
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<tr>
<td>St. John’s Ramada Hotel</td>
<td>May 4, 2010</td>
<td>8:30 – 12:30</td>
<td>Proper Handling of Chlorine &amp; Chlorine Containers</td>
</tr>
<tr>
<td>Coast of Bays Arts and Exploration Centre (intersection of routes 360 &amp;361)</td>
<td>June 8, 2010</td>
<td>8:30 – 4:30</td>
<td>Water Distribution System Basics</td>
</tr>
<tr>
<td>Coast of Bays Arts and Exploration Centre (intersection of routes 360 &amp;361)</td>
<td>June 9, 2010</td>
<td>8:30 – 12:30</td>
<td>Proper Handling of Chlorine &amp; Chlorine Containers</td>
</tr>
</tbody>
</table>

**In order to plan for space, handout materials, etc., please advise me by fax (709-729-0320) or email (dspracklin@gov.nl.ca) if you plan on attending any of the above noted seminars or certification exams.**
**If you are interested in writing a Certification Exam, you must contact Deneen Spracklin prior to the exam.** Operators writing the exam MUST meet qualifications and MUST have submitted an Application for Certification. An operator will not be able to show up the week of the exam and decide to write. The fee for the certification exam is $50.00 and the cheque must be made payable to ACWWVCB.

If you have any questions regarding the Spring 2010 Seminar Schedule or the OETC Program in general, please contact the following.

Deneen Spracklin, P.Eng.
Coordinator, Operator Education
Department of Environment & Conservation
PO Box 8700
St. John’s NL A1B 4J6
Phone: (709)729-1158
Fax: (709)729-0320
dspracklin@gov.nl.ca
PERMIT TO ALTER A BODY OF WATER

Pursuant to the Water Resources Act, SNL 2002 cW-4.01, Section(s) 48

Date: APRIL 14, 2010
Proponent: Harbour Authority of Upper Island Cove
PO Box 178
Upper Island Cove NL A0A 4E0
Attention: Stanley Mercer
Re: Upper Island Cove - Sea Wall Restoration

File No: 524
Permit No: ALTS203

Permission is hereby given for: the construction of a 33 metre long sea wall on an existing community wharf to replace a deteriorated wall at Upper Island Cove Harbour, with reference to the application received April 5, 2010 and additional information received April 13, 2010.

- This permit does not release the proponent from the obligation to obtain appropriate approvals from other concerned provincial, federal and municipal agencies.
- This permit is subject to the terms and conditions indicated in Appendix A (attached).
- It should be noted that prior to any significant changes in the design or installation of the proposed works, or in event of changes in ownership or management of the project, an amendment to this permit must be obtained from the Department of Environment and Conservation under Section 49 of the Water Resources Act.
- Failure to comply with the terms and conditions will render this permit null and void, place the proponent and their agent(s) in violation of the Water Resources Act and make the proponent responsible for taking any remedial measures as may be prescribed by this Department.

[Signature]
MINISTER
General Alterations

1. Any work that must be performed below the high water mark must be carried out during a period of low water levels.

2. Any flowing or standing water must be diverted around work sites so that work is carried out in the dry.

3. Water pumped from excavations or work areas, or any runoff or effluent directed out of work sites, must have silt and turbidity removed by settling ponds, filtration, or other suitable treatment before discharging to a body of water. Effluent discharged into receiving waters must comply with the Environmental Control Water and Sewage Regulations, 2003.

4. All operations must be carried out in a manner that prevents damage to land, vegetation, and watercourses, and which prevents pollution of bodies of water.

5. The use of heavy equipment in streams or bodies of water is not permitted. The operation of heavy equipment must be confined to dry stable areas.

6. All vehicles and equipment must be clean and in good repair, free of mud and oil, or other harmful substances that could impair water quality.

7. During the construction of concrete components, formwork must be properly constructed to prevent any fresh concrete from entering a body of water. Dumping of concrete or washing of tools and equipment in any body of water is prohibited.

8. Any areas adversely affected by this project must be restored to a state that resembles local natural conditions. Further remedial measures to mitigate environmental impacts on water resources can and will be specified, if considered necessary in the opinion of the Department.

9. The bed, banks and floodplains of watercourses, or other vulnerable areas affected by this project, must be adequately protected from erosion by seeding, sodding or placing of rip-rap.

10. All waste materials resulting from this project must be disposed of at a site approved by the regional Government Service Centre of the Department of Government Services.

11. The owners of structures are responsible for any environmental damage resulting from dislodgement caused by wind, wave, ice action, or structural failure.

12. The attached Completion Report (Appendix B) for Permit No. 5203 must be completed and returned to this Department upon completion of the approved works.

13. This Permit is valid for two years from the date of issue. Work must be completed by that date or the application and approval procedure must be repeated.

14. The location of the work is highlighted on the Location Map for this Permit attached as Appendix C.
Appendix B - Completion Report

Pursuant to the Water Resources Act, SNL 2002 cW-4.01, Section(s) 48

Date: APRIL 14, 2010

Proponent: Harbour Authority of Upper Island Cove
PO Box 178
Upper Island Cove NL A0A 4E0

Attention: Stanley Mercer

Re: Upper Island Cove - Sea Wall Restoration

Permission was given for: the construction of a 33 metre long sea wall on an existing community wharf to replace a deteriorated wall at Upper Island Cove Harbour, with reference to the application received April 5, 2010 and additional information received April 13, 2010.

I (the proponent named above) do hereby certify that the project described above was completed in accordance with the plans and specifications submitted to the Department of Environment and Conservation and that the work was carried out in strict compliance with the terms and conditions of the Permit issued for this project.

Date: ___________________________ Signature: ________________________

This completion report must be completed and forwarded to the following address upon completion of the approved work.

Department of Environment and Conservation
Water Resources Management Division
PO Box 8700
St. John's NL A1B 4J6
APPENDIX C
Location Map for Environmental Permit
I have a series of water distribution seminars and certification exam scheduled for July 13 to 16, 2010 at the Ramada Hotel in St. John's. For more information, see the attached notification or call me at 729-1158.

Thanks
Deneen
Summer 2010 Operator Education Seminar Notification

Attention: Drinking Water Distribution System Operators

The following water distribution education seminars have been scheduled for the Summer 2010 season. Operators, municipal staff, municipal officials, government personnel, and other interested water professionals are welcome to attend. These seminars are not limited to new operators. There is no fee associated with the seminars; however all associated travel costs, including meals, will be the responsibility of the attendee.

<table>
<thead>
<tr>
<th>Location</th>
<th>Date</th>
<th>Time</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>St. John's</td>
<td>Tuesday, July 13,</td>
<td>8:30 - 4:30</td>
<td>Water Distribution Basics</td>
</tr>
<tr>
<td>Ramada Hotel</td>
<td>2010</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Wednesday, July 14</td>
<td>8:30 - 4:30</td>
<td>Water System Hydraulics</td>
</tr>
<tr>
<td></td>
<td>Thursday, July 15</td>
<td>8:30 - 4:30</td>
<td>Water Quality Issues</td>
</tr>
<tr>
<td></td>
<td>Friday, July 16,</td>
<td>8:30 - 12:00</td>
<td>Certification Exam</td>
</tr>
<tr>
<td></td>
<td>2010</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Registration for the above seminars or certification exam can be made by contacting Deneen Spracklin at (709)729-1158, fax (709)729-0320, or by email at dspracklin@gov.nl.ca.
Please find attached the Fall 2010 Seminar Schedule for water system operators. More courses will be scheduled for the months of November and December, 2010. The schedule for these additional courses will be released over the next couple of weeks.

If you have trouble viewing the attached document, please let me know.
Thanks,
Deneen

Deneen Spracklin, P.Eng.
Coordinator, Operator Education
Operator Education, Training and Certification Section
Water Resources Management Division
Department of Environment and Conservation
PO Box 8700
St. John's NL A1B 4J6
Ph: (709) 729-1158
Fax: (709) 729-0320
dspracklin@gov.nl.ca
Fall 2010 Operator Education Seminars

Attention: Drinking Water System Operators

Please refer to the following table for information pertaining to seminar topics, locations, dates, and times. Operators, municipal staff, municipal officials, government personnel, and other interested water professionals are welcome to attend. These seminars are not limited to new operators. There is no fee associated with the seminars; however all associated travel costs, including meals, are not included.

<table>
<thead>
<tr>
<th>Location</th>
<th>Date</th>
<th>Time</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bonavista Harbour Quarters Inn</td>
<td>Sept. 29, 2010</td>
<td>8:30 - 12:30</td>
<td>Proper Handling of Chlorine &amp; Chlorine Containers</td>
</tr>
<tr>
<td>Clarenville St. Jude Hotel</td>
<td>Sept. 30, 2010</td>
<td>8:30 - 4:30</td>
<td>Water Distribution System Hydraulics</td>
</tr>
<tr>
<td>Marystown Marystown Hotel</td>
<td>Oct. 7, 2010</td>
<td>8:30 - 12:30</td>
<td>Proper Handling of Chlorine &amp; Chlorine Containers</td>
</tr>
<tr>
<td>Twillingate Anchor Inn</td>
<td>Oct. 26, 2010</td>
<td>8:30 - 12:30</td>
<td>Proper Handling of Chlorine &amp; Chlorine Containers</td>
</tr>
<tr>
<td>Lumsden Lumsden Town Hall</td>
<td>Oct. 27, 2010</td>
<td>8:30 - 12:30</td>
<td>Proper Handling of Chlorine &amp; Chlorine Containers</td>
</tr>
</tbody>
</table>

**In order to plan for space, handout materials, etc., please advise me by fax (709-729-0320) or email (dspracklin@gov.nl.ca) if you plan on attending any of the above noted seminars or certification exams.**

More courses will be scheduled during the months of November and December 2010... watch for future notifications.

If you have any questions regarding the Fall 2010 Seminar Schedule or the Operator Education, Training and Certification Program in general, please contact the following:

Deneen Spracklin, P.Eng.
Coordinator, Operator Education
Department of Environment & Conservation
PO Box 8700
St. John’s NL A1B 4J6
Phone: (709)729-1158
Fax: (709)729-0320
Hi all,

Attached is the finalized Fall 2010 Operator Seminar Schedule. Since my last correspondence there have been a few changes to the schedule...
- a few classes have been added,
- the seminar in Clarenville has been rescheduled
- the seminar in Bonavista has been cancelled and will be rescheduled at a later date.

If you have any questions, give me a call at 729-1158 or you can reach by email.

Thanks
Deneen

Deneen Spracklin, P.Eng.
Coordinator, Operator Education
Operator Education, Training and Certification Section
Water Resources Management Division
Department of Environment and Conservation
PO Box 8700
St. John's NL A1B 4J6
Ph: (709) 729-1158
Fax: (709) 729-0320
dspracklin@gov.nl.ca
Fall 2010 Operator Education Seminars
Attention: Drinking Water System and Wastewater System Operators

Please refer to the following table for information pertaining to seminar topics, locations, dates, and times. Operators, municipal staff, municipal officials, government personnel, and other interested water professionals are welcome to attend. There is no fee associated with the seminars; however all associated travel costs, including meals, are not included. The seminar previously scheduled for Bonavista on September 29, 2010 has been canceled and will be rescheduled at a later date.

<table>
<thead>
<tr>
<th>Location</th>
<th>Date</th>
<th>Time</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marystown, Marystown Hotel</td>
<td>Oct. 7, 2010</td>
<td>8:30 – 12:30</td>
<td>Proper Handling of Chlorine &amp; Chlorine Containers</td>
</tr>
<tr>
<td>***Bay Roberts, Klondyke Hotel</td>
<td>Oct. 22, 2010</td>
<td>8:30 – 4:30</td>
<td>Wastewater Collection – Day 1</td>
</tr>
<tr>
<td></td>
<td>Nov. 18, 2010</td>
<td>8:30 – 4:30</td>
<td>Wastewater Collection – Day 2</td>
</tr>
<tr>
<td></td>
<td>Nov. 19, 2010</td>
<td>8:30 – 12:30</td>
<td>Certification Exam</td>
</tr>
<tr>
<td>Twillingate, Anchor Inn</td>
<td>Oct. 26, 2010</td>
<td>8:30 – 12:30</td>
<td>Proper Handling of Chlorine &amp; Chlorine Containers</td>
</tr>
<tr>
<td>Lumsden, Lumsden Town Hall</td>
<td>Oct. 27, 2010</td>
<td>8:30 – 12:30</td>
<td>Proper Handling of Chlorine &amp; Chlorine Containers</td>
</tr>
<tr>
<td>Rescheduled</td>
<td>Nov. 3, 2010</td>
<td>8:30 – 4:30</td>
<td>Water Distribution System Hydraulics</td>
</tr>
<tr>
<td>Clarenville, St. Jude Hotel</td>
<td>Nov. 9, 2010</td>
<td>9:00 – 4:30</td>
<td>Water Distribution System Hydraulics</td>
</tr>
<tr>
<td></td>
<td>Nov. 10, 2010</td>
<td>9:00 – 12:30</td>
<td>Certification Exam</td>
</tr>
<tr>
<td>***Coast of Bays</td>
<td>Nov. 23, 2010</td>
<td>8:30 – 4:30</td>
<td>Wastewater Collection – Day 1</td>
</tr>
<tr>
<td>Mi’kmaq Discovery Centre</td>
<td>Nov. 24, 2010</td>
<td>8:30 – 4:30</td>
<td>Wastewater Collection – Day 2</td>
</tr>
<tr>
<td></td>
<td>Nov. 25, 2010</td>
<td>8:30 – 12:30</td>
<td>Certification Exam</td>
</tr>
<tr>
<td>***Gander, Hotel Gander</td>
<td>Nov. 30, 2010</td>
<td>8:30 – 4:30</td>
<td>Water Distribution System Basics</td>
</tr>
<tr>
<td></td>
<td>Dec. 1, 2010</td>
<td>8:30 – 4:30</td>
<td>Water Distribution System Hydraulics</td>
</tr>
<tr>
<td></td>
<td>Dec. 2, 2010</td>
<td>8:30 – 4:30</td>
<td>Water Quality Issues</td>
</tr>
<tr>
<td></td>
<td>Dec. 3, 2010</td>
<td>8:30 – 12:30</td>
<td>Certification Exam</td>
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If you have any questions regarding the Fall 2010 Seminar Schedule or the OETC Program in general, please contact the following.

Deneen Spracklin, P.Eng.
Coordinator, Operator Education
Department of Environment & Conservation
PO Box 8700
St. John’s NL A1B 4J6
Phone: (709)729-1158
Fax: (709)729-0320
dspracklin@gov.nl.ca
Please find attached the notification documents for the 2011 Clean and Safe Drinking Water Workshop. A copy of the...
registration form can also be found at the following web address:


Deneen Spracklin, P.Eng.
Coordinator, Operator Education
Operator Education, Training and Certification Section
Water Resources Management Division
Department of Environment and Conservation
PO Box 8700
St. John's NL A1B 4J6
Ph: (709) 729-1158
Fax: (709) 729-0320
dspracklin@gov.nl.ca
Re: 2011 Clean and Safe Drinking Water Workshop

The Department of Environment and Conservation will be hosting the annual Clean and Safe Drinking Water Workshop on March 22 to 24, 2011 at the Hotel Gander, Gander, NL. This workshop will be of interest to water system operation and maintenance personnel, municipal administrators and elected officials.

The theme of this year’s workshop is “Decade of Commitment” and was chosen to commemorate the tenth year of this unique event and to recognize the commitment of the entire province to drinking water over this time. Presentations will cover various operation and maintenance activities, and treatment options that are applicable to small communities to ensure delivery of clean and safe drinking water to our residents.

A tradeshow exhibition will be held on March 22 and 23, 2010. Workshop attendees will have an opportunity to meet with equipment suppliers to learn more about their technologies and services. Please refer to the schedule of events for information relating to additional activities that will be occurring during the workshop...you won’t want to miss out!

There is no registration fee for this workshop. Participants will be responsible for their own transportation, meals and accommodation. We do request that participants register so we can prepare adequate numbers of registration packages. You can register by completing the attached registration form and faxing, mailing or emailing it as soon as possible to the address identified.

The Department of Municipal Affairs will continue with its policy of providing a subsidy to Municipalities and Local Service Districts to offset expenses associated with attending the workshop. For communities located on the island portion of the province, the subsidy will be up to $300.00. The subsidy will be up to $600.00 for communities in Labrador.

Councils or committees must write the appropriate regional office of the Department of Municipal Affairs indicating they will be attending the workshop, and requesting approval for the subsidy prior to attending. As well, claims for the subsidy must be directed to the Department of Municipal Affairs – please do not send your funding request to the Department of Environment and Conservation.

The contact information for the Department of Municipal Affairs Regional offices is as follows:

<table>
<thead>
<tr>
<th>Region</th>
<th>Contact</th>
<th>Phone</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eastern</td>
<td>Lorraine Zimunya</td>
<td>729-3276</td>
<td><a href="mailto:lorrainezimunya@gov.nl.ca">lorrainezimunya@gov.nl.ca</a></td>
</tr>
<tr>
<td>Central</td>
<td>Angus Bradley</td>
<td>256-1154</td>
<td>a <a href="mailto:Bradley@gov.nl.ca">Bradley@gov.nl.ca</a></td>
</tr>
<tr>
<td>Western &amp; Labrador</td>
<td>Barry Gillingham</td>
<td>637-2334</td>
<td><a href="mailto:barrygillingham@gov.nl.ca">barrygillingham@gov.nl.ca</a></td>
</tr>
</tbody>
</table>
For further information regarding this workshop please contact me by phone at (709)729-1158, by fax at (709)729-0320, or by email at dspracklin@gov.nl.ca. We look forward to seeing you at the workshop!

Yours truly

_Deneen Spracklin, P.Eng._
Coordinator, Operator Education
Registration Form

2011 Clean and Safe Drinking Water Workshop: Decade of Commitment

March 22 to 24, 2011
Hotel Gander, Gander, NL

Name and Title of Person(s) Attending


Organization

Mailing Address

City/Town  Prov  Postal Code

Phone  Fax  Email

***There will be no registration fee for this workshop, however participants are required to make their own arrangements for transportation, accommodation and meals.

Please return form by fax, mail, or email to:
Ms. Catherine Boone
Water Resources Management Division
Department of Environment and Conservation
3 Cromer Avenue
Grand Falls-Windsor NL A2A 1W9
Fax: (709) 292-4365
Email: catherineboone@gov.nl.ca

For additional information please call Deneen Spracklin at (709) 729-1158
2011 Clean & Safe Drinking Water Workshop: Decade of Commitment

Schedule of Events

Monday, March 21, 2011
6:00 to 8:00 pm – Early Registration and Trade Show Set-up

Tuesday, March 22, 2011
8:00 am – Registration
8:45 am – Sessions Start
9:00 am – Keynote Speaker Dr. Steve Hrudey
4:30 pm – Sessions End

7:00 pm – Minister’s Reception (Trade Show Area)

Wednesday, March 23, 2011
8:45 am – Sessions Start
9:00 am – Presentation of Operator of the Year Awards
4:30 pm – Sessions End

5:00 pm – Working Model Demonstration (Trade Show Area)

Thursday, March 24, 2011
8:45 am - Sessions Start
12:00 pm – Workshop Ends

12:00 pm – Prize Giveaway

**Winner of laptop (ACER Aspire Notebook) must be in attendance at the time of the draw to be eligible. Employees of the Government of NL are not eligible for the prize draw.
FW: 2011 ACWWA Conference and Tradeshow
2011 ACWWA Conference.pdf
This email is being forwarded on behalf of the Atlantic Canada Water and Wastewater Association. All details pertaining to the 2011 ACWWA Conference (including associated costs) are included in the attached document or on-line at www.acwwa.ca.

Deneen Spracklin, P.Eng.
Coordinator, Operator Education
Operator Education, Training and Certification Section
Water Resources Management Division
Department of Environment and Conservation
PO Box 8700
St. John’s NL A1B 4J6
Ph: (709) 729-1158
Fax: (709) 729-0320
dspracklin@gov.nl.ca

From: ACWWA [mailto:contact@acwwa.ca]
Sent: Tuesday, July 05, 2011 3:00 PM
To: ACWWA
Subject: 2011 ACWWA Conference and Tradeshow

Please come and join us at the ACWWA Annual conference in St. John’s, NL October 2-4, 2011.

All details are attached.

Online registration is available at www.acwwa.ca

Clara Shea
Potential copyright material

If you wish to obtain a copy please contact the ATIPP Office at (709) 729-7072 or atippoffice@gov.nl.ca.
In Search of Lost Water....Identifying Municipal Water Losses

This webinar will be of interest to directors, supervisors, managers, financial officers, planners, water efficiency coordinators, water operators and others involved in municipal water supply.

Topics to be covered through this Webinar include:

- Drivers for water loss management
- Water leakage and variable cost losses
- 5 Steps to water loss reduction
- IWA/AWWA Water Audit and Water Balance
- Current Annual Real Losses (CARL) and Unavoidable Annual Real Losses (UARL), Infrastructure Leakage Index (ILI)
- Source meter accuracy, customer meter under-registration and revenue losses
- Examples of Atlantic Provinces and Canadian IWA Balances

Real time questions will also be answered during the webinar session.

About the presenter:

Kingsley Blease is a professional engineer with 35 years of experience in water and wastewater projects, in both Canada and the United Kingdom. Kingsley has considerable experience over the last 25 years with water loss management. He has completed numerous water loss studies for municipalities across Canada. In addition, he has six years experience operating the water supply system of a major city, including implementing leakage control and developing water supply network models. Kingsley is currently a member of the Ontario Water Works Association Water Efficiency Committee, and a past chair, and has delivered several workshops for ACWWA.

Registration Information
Member Registration $65*
Non-member Registration $85*
* There are no additional costs or premiums associated with number of participants viewing the webinar per service connection.

Webinar details will be provided to those who register the day before the webinar.

In Search of Lost Water .... Identifying Municipal Water Losses

Registrations can also be made via the web at www.acwwa.ca

I wish to register for the following

In Search of Lost Water .... Identifying Municipal Water Losses

November 29, 2011

Name:

Company:

Company Mailing Address:

City, Province: __________________________ Postal Code: __________________________

Phone: __________________ Fax: __________________ Email: __________________

ACWWA Membership No: __________________ WEF Membership No: __________________

(If no membership number is listed, you will be invoiced as a non-member. See pricing below.)

Member Registration $65*
Non-member Registration $85*

* There are no additional costs or premiums associated with number of participants viewing the webinar per service connection.

Webinar details will be provided to those who register the day before the webinar.
Cheques should be made payable to

ACWWA

PO Box 41002 Dartmouth, NS B2Y 4P7
Phone 902-434-6002 Fax 902-435-7796
In Search of Lost Water....Identifying Municipal Water Losses

Webinar 1 of 3
Tuesday November 29th, 2011
From 12:00 pm to 1:00 pm AST

This webinar will be of interest to directors, supervisors, managers, financial officers, planners, water efficiency coordinators, water operators and others involved in municipal water supply.

Topics to be covered through this Webinar include:

- Drivers for water loss management
- Water leakage and variable cost losses
- 5 Steps to water loss reduction
- IWA/AWWA Water Audit and Water Balance
- Current Annual Real Losses (CARL) and Unavoidable Annual Real Losses (UARL), Infrastructure Leakage Index (ILI)
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In Search of Lost Water....Identifying Municipal Water Losses

November 29, 2011

Name: ________________________________

Company: ________________________________

Company Mailing Address: ________________________________

City, Province: __________________________ Postal Code: ____________

Phone: ____________ Fax: ____________ Email: __________________________

ACWWA Membership No: __________________ WEF Membership No: __________________

(If no membership number is listed, you will be invoiced as a non-member. See pricing below.)

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Non-member Registration $85*

* There are no additional costs or premiums associated with number of participants viewing the webinar per service connection.

Webinar details will be provided to those who register the day before the webinar.

Cheques should be made payable to
ACWWA
PO Box 41002 Dartmouth, NS B2Y 4P7
Phone 902-434-6002 Fax 902-435-7796
From: Spracklin, Deneen
Sent: Monday, December 12, 2011 4:23 PM
To: Ben Noseworthy (bennooseworthy@townofwabana.net);
    Ben Noseworthy (bennooseworthy@townofwabana.net);
    Ben Noseworthy (bennooseworthy@townofwabana.net);
    Bregus (brigus@eastlink.ca);
    'Bonavista'; 'Branch'; 'Brigus'; 'Bryant's Cove 2';
    'Burin (bethvanran@eastlink.ca)'; 'Carbonear'; 'CBS';
    'CBS R Franey'; 'Chris Tilley';
    'Clarenville'; 'Clarke's Beach'; 'Come By Chance'; 'Conception Harbour';
    'charbour@eastlink.ca'; 'Daisy Senior';
    'dsenior@townofmarystown.ca';
    'Daphne Coles (publicworks@townoffogoisland.ca)';
    'Daphne Coles (publicworks@townoffogoisland.ca)';
    'Georges Bk- Curtis Skiffington';
    'Grand Bank'; 'Harbour Grace'; 'Harbour Main-
    Chapel's Cove (hmcouncil@eastlink.ca);
    'Harper's Cove'; 'Heart's Content'; 'Heart's Desire';
    'Hedley Rowe (hrowe@conceptionbaysouth.ca)';
    'Jim (jim@clarenville.net)'; 'Jim Barnes (jim.barnes@cna.nl.ca);
    'Jody Hayse (jhayse@hotmail.com)'; 'jdrummond@nalcenergy.com';
    'kathy.bolger@labcity.nl.ca';
    'Lawn'; 'Long Hr- Mt. Arlington Hts';
    'Maryestown'; 'Bryant's Cove 1 (bryantscove@eastlink.ca)';
    'msears@mountpearl.ca'; 'Mt Pearl, Andre Marshall';
    'New Perlican'; 'Norman's Cove-Long Cove'; 'Old Perlican';
    'Parks Canada'; 'Paul Whelan (pwhelan@conceptionbaysouth.ca)';
    'Pouch Cove'; 'Ralph Smith (ralph@clareville.net)';
    'Red Harbour'; 'Riverhead'; 'Rod Rideout (rideout@stjohns.ca)';
    'Ron Fleming (rfleming@townofparadise.ca)';
    'Rushoon'; 'Mt Pearl';
    'Small Point-Adam's Cove-Blackhead-Broad Cove';
    'South River'; 'Southern Hr'; 'Spaniards Bay';
    'St. John's - A Niblock'; 'St. John's L Winsor (lwinsor@stjohns.ca)';
    'St. John's, Phillips -Jason'; 'St. John's, Williams, Brian'; 'St.
    Lawrence'; 'St. Mary's'; 'Sunnyside'; 'terry.hanlon@pc.gc.ca';
    'Town Clerk';
    'heartsdelightislington@persona.ca);' 'Trinity'; 'Trinity Bay
    North'; 'Upper Island Cove';
    'Winterland' (townofwhiteway@eastlink.ca); 'wince@clarenville.net';
    'Winterland'

Subject: 2012 Operator of the Year Awards
The nomination process for the 2012 Operator of the Year Awards has begun. Details pertaining to the awards process are in the attached documents. If you have any questions, please let me know.

Thanks,
Deneen

Deneen Spracklin, P.Eng.
Program Lead
Operator Education, Training and Certification Program
Water Resources Management Division
Department of Environment and Conservation
PO Box 8700
St. John's NL A1B 4J6
Ph: (709) 729-1158
Fax: (709) 729-0320
dspracklin@gov.nl.ca
Operator of the Year Award
2012

In order to recognize the outstanding dedication of those operators who provide us with clean and safe drinking water, the Operator Education, Training, and Certification Program created the Operator of the Year award. The awards process includes two categories; Operator of the Year and Volunteer Operator of the Year.

Recipients of the 2011 awards were the following:
- Operator of the Year – Tony Skiffington (Town of Gambo); and
- Volunteer Operator of the Year – Edmond Fudge and John Braye (Town of Brighton).

Deserving operators will have demonstrated ingenuity, proficiency, dedication and professionalism in water system operation. This operator must be certified or working towards certification; participates in education and training opportunities; and show leadership, support to other workers, and goes the extra mile for his/her community.

Does your community have an operator who is deserving of this award? If so, please complete the enclosed nomination form and ensure you include as much information as possible. Your recommendation will be very important during the selection process.

Please return your nomination by fax (709-729-0320), email (dspracklin@gov.nl.ca) or mail to:
Department of Environment and Conservation
P.O Box 8700
St. John’s NL A1B 4J6
Attention: Deneen Spracklin

The chosen recipients will receive an award which will be presented at the 2012 Clean and Safe Drinking Water Workshop (March 27 to 29, 2012). Award selection will be made by the Operator Education, Training and Certification Section.

Nominations must be received no later than 4:30 pm on February 24, 2012

Newfoundland Labrador
2012 Operator of the Year Award
Nomination Form

Recognizing an operator who has demonstrated professionalism and dedication in providing clean and safe drinking water

Award Category: Volunteer ___________ Paid ___________

Operator’s Name: ____________________________________________

Community: ____________________________________________

Years of Service: ____________________________________________

Submitted by: ____________________________________________

Tell us about your Operator:

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

(Add additional pages if necessary)
Keith, Debi L

From: spracklin.deneen
Sent: Wednesday, December 14, 2011 12:16 PM
To: whitewayn.k.ca); 'wince@clarencetownplace.net'; 'winterland.40(~)

'Ben Noseworthy (ben Noseworthy@townofwhiteway.ca);
'Bonavista'; 'Branch'; 'Brigus (brigus@eastlink.ca);
'Bryant's Cove 2'; 'Burin (bethanrhahan@eastlink.ca);
'Carbonear'; 'CBS'; 'CBS R Franey'; 'Chris Tilley (ciltley@conceptionbaysouth.ca);
'Clarenville'; 'Clarke's Beach'; 'Come By Chance'; 'Conception Harbour
(whiteway@eastlink.ca);'Daisy Senior (dotesenior@townofmarystown.ca);
'Daphne Coles
(publicworks@townoffogoisland.ca)

'Ed Antle - Argentia'; 'Ferryland'; 'Garnish'; 'Gary
Corbett (garycorbett@townofholyrood.com); 'Gary Squires (gsquires@stjohns.ca);

'Georges Blks Curtis Skiffington';
'Grand Bank'; 'Heart's Desire'; 'Heart's Content'; 'Heart's Desire'; 'Heart's Content'; 'Heart's Content'; 'Heart's Content';

Jim (jim@clarencetownplace.net); 'Jim Barnes (jimbarnes@cna.nl.ca); 'Jody Hayse
(burinfired@barnes@hotmail.com);'
tedjrummond@naloenergy.com)
(kathy.bolger@labcity.nf.ca);
Anthony (kanthony@town.torbay.nf.ca)
'Lawn';

'Ken Bolger'; 'Kathy Bolger'; 'Ken

'Long Hr- Mt. Arlington Hts'; 'Marystown'; 'Bryant's Cove 1 (bryantscove@eastlink.ca);
(mshear@mountgrove.ca); 'Mt Pearl, Andre Marshall';
'New Perlican';
'Norman's Cove-Long Cove'; 'Old Perlican'; 'Parks Canada'; 'Paul Whelan
(pwhelan@conceptionbaysouth.ca);

'Petty Hr Maddox Cove';
'Phonse Stacey'; 'Point Lance'; 'Port Rexton'; 'Portugal Cove-St. Philip's'; 'Pouch Cove
Ralph Smith (ralph@clarencetownplace.net);
Red Harbour'; 'Riverhead'; 'Road Rideout
(rroadout@stjohns.ca); Ron Fleming (rfleming@townofparadise.ca);

'Mt Pearl S Cob'; 'Small Point-Adam's
Cove-Blackhead-Broad Cove'; 'South River'; 'Southern Hr'; 'Spaniard's Bay'; 'St. John's - A
Niblock'; 'St. John's L Winson (lwinson@stjohns.ca);' St. John's, Phillips - Jason'; 'St. John's,
Williams, Brian'; 'St. Lawrence'; 'St. Mary's;
'Sunnyside';
'terry.hanlon@pc.gc.ca';
'Town Clerk'; 'heartsdelightislington@persona.ca');
'Trinity'; 'Trinity Bay North';
'Upper Island Cove';
'Whiteway
(townofwhiteway@eastlink.ca);' 'wince@clarencetownplace.net'; 'Winterland'
The Operator Education, Training and Certification Program will be offering some Water Distribution Classroom Seminars over the winter 2012 season. Courses currently scheduled include the following:

**Location: Clarenville, St. Jude Hotel**
Date and Time: February 1, 2012 (8:30 to 4:00)
Seminar Topic: Water Distribution Basics

**Location: St. John’s (Ramada Hotel, Kenmount Road)**
Date and Time: February 14 to 16, 2012 (8:30 to 4:00 each day)
Seminar Topic: Day 1 – Water Distribution System Basics
Day 2 – Water Distribution System Hydraulics
Day 3 – Water Quality Issues

Certification Exams are scheduled to follow the sessions scheduled for St. John’s on February 17, 2012 (8:30 to 12:30) at the Ramada Hotel.

If you are interested in attending either course or the certification exam, you must register with me by email, phone or fax. The attached document is also a notification of the above mentioned courses.

Deneen Spracklin, P.Eng.
Program Lead
Operator Education, Training and Certification Program
Water Resources Management Division
Department of Environment and Conservation
PO Box 8700
St. John’s NL A1B 4J6
Ph: (709) 729-1158
Fax: (709) 729-0320
dspracklin@gov.nl.ca
Winter 2012 Operator Education Seminars

Attention: Drinking Water System Operators

Please refer to the following table for information pertaining to seminar topics, locations, dates, and times. Operators, municipal staff, municipal officials, and other interested water professionals are welcome to attend. There is no fee associated with the seminars; however all associated travel costs, including meals, are not included.

<table>
<thead>
<tr>
<th>Location</th>
<th>Date</th>
<th>Time</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clarenville</td>
<td>February 1, 2012</td>
<td>8:30-4:00</td>
<td>Water Distribution System Basics</td>
</tr>
<tr>
<td>St. Jude Hotel</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>St. John’s</td>
<td>February 14, 2012</td>
<td>8:30-4:00</td>
<td>Water Distribution System Basics</td>
</tr>
<tr>
<td>Ramada Hotel</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>February 15, 2012</td>
<td>8:30-4:00</td>
<td></td>
<td>Water Distribution System Hydraulics</td>
</tr>
<tr>
<td>February 16, 2012</td>
<td>8:30-4:00</td>
<td></td>
<td>Water Quality Issues</td>
</tr>
<tr>
<td>February 17, 2012</td>
<td>8:30-12:30</td>
<td></td>
<td>Certification Exam</td>
</tr>
</tbody>
</table>

To find out more information on the content to be covered during the seminars visit our website, http://www.env.gov.nl.ca/env/waterres/training/operator_education/index.html

In order to plan for space, handout materials, etc., please advise me by fax (709-729-0320) or email (dspracklin@gov.nl.ca) if you plan on attending any of the above noted seminars or certification exam.

If you have any questions regarding the Winter 2012 Seminar Schedule or the OETC Program in general, please contact the following.

Deneen Spracklin, P.Eng.
Program Lead, Operator Education, Training and Certification Program
Department of Environment and Conservation
PO Box 8700
St. John’s NL A1B 4J6
Phone: (709)729-1158
Fax: (709)729-0320
dspracklin@gov.nl.ca
To: (wade.bowring@personainternet.com); ' (lwrose@eastlink.ca); 'Whiteway (townofwhiteway@eastlink.ca); 'wince@clarenville.net'; 'Winterland'

Subject: 2012 Clean and Safe Drinking Water Workshop

Reminder: 2012 Clean and Safe Drinking Water Workshop (March 27 to 29, 2012 at the Hotel Gander)

Registration details and a draft agenda for the event can be found at the following website:

Deneen Spracklin, P.Eng.
Program Lead
Operator Education, Training and Certification Program
Water Resources Management Division
Department of Environment and Conservation
PO Box 8700
St. John's NL A1B 4J6
Ph: (709) 729-1158
Fax: (709) 729-0320
dspracklin@gov.nl.ca
Neil,

The following is a summary of the attendance records for operators from Upper Island Cove since fiscal year 2007/08:

Cliff Coombs:
Wastewater Collection Basics – April 2008

Harold Mercer:
Wastewater Collection Day 2 – October 2008

Raymond Shaye:
Wastewater Collection Day 2 – October 2008
Proper Handling of Chlorine and Chlorine Containers – April 2010

According to past records, Cliff achieved his water distribution certification in 2001 and also completed courses at that time.

If you need anything else let me know.

Deneen

Deneen Spracklin, P.Eng.
Program Lead
Operator Education, Training and Certification Program
Water Resources Management Division
Department of Environment and Conservation
PO Box 8700
St. John's NL A1B 4J6
Phone: (709) 729-1158
Fax: (709) 729-0320
Mr. Shute,

During the on-site training session of June 13, 2012, a number of safety concerns were found after the chlorine gas sensors had been tested.

1. The outside warning light did not illuminate.

2. The ventilation system did not automatically engage when the sensors detected chlorine gas. When chlorine gas is present, the gas settles to the floor and the near floor vent duct should remove this hazard. The ventilation system was also switched to manual mode but it still did not engage.

Seeing these components are an integral part of the chlorine gas detection system, the safety concerns above should be address as quickly as possible.

I did find the chlorine gas sensor responded very quickly to the bump test and the audio alarm was working fine.

Please feel free to contact me at 729-7363 for further discussion.

Darren L Patey, C.E.T.

Operator Trainer
Water Resources Management Division
Mr. Shute,

After conducting a Gas Chlorination training session on June 13-2012, with the town’s Water Distribution Operators, recommendations for personal protective equipment (PPE) are as follows:

1. It is recommended the Town equip Water Distribution Operators with full-faced respirators complete with approved chlorine gas cartridge filters. When indicated, the chlorine gas cartridge filters will need to be replaced. These respirators are recommended to only be used when changing out chlorine cylinders or testing of chlorine gas equipment. If a chlorine gas leak is detected, under no circumstances are the respirators to be used in place of the Self Contained Breathing Apparatus (SCBA). Before purchasing, the operators would be required to have a Fit Test to determine what size respirator is required. The Fit Test is conducted by a number of safety companies throughout the province.

2. It is also recommended the Town equip Water Distribution Operators with chemical resistant gloves for use when handling chlorine gas cylinders and, in general, in the chlorination building.

These recommendations are suggested to enhance the safety of the Water Distribution Operators.

Darren L Patey, C.E.T.
Operator Trainer
Water Resources Management Division
George,

Ben Hammond passed on your concerns regarding the HAA levels in the Town of Upper Island Cove. Darren Patey and myself will conduct a review of the technical memo that was provided to the Town of Upper Island Cove in 2011 regarding disinfection by-product issues to see what corrective measures have been implemented by the Town since that time. According to your water quality data, you have made some improvements by lowering your HAA levels from pre-2012 levels.

According to Ben Hammond, he collected samples from your distribution system on December 1, 2014. I am assuming your booster station was still non-operational at that time. It will be interesting to see what impact this may have on your HAA and THM levels.

Darren or myself will be in touch in the near future to discuss the technical memo and improvements that have been implemented.

Deneen

Deneen Spracklin, P.Eng
Program Lead
Community Water and Wastewater

Hello Deneen,

During my sampling in Upper Island Cove, the town expressed concerns to me over their HAA exceedances and not being able to get ranked on their drinking water quality report – they are not ranked based on HAA exceedances which range from 80 to 200 ug/L (present to 2008). So in a lot of cases they are kind of hovering around or are close to the guideline.

Otherwise their water is fairly good and would probably be ranked high on the index.

Upper Island Cove receives water from Spaniard’s Bay, it is chlorinated and adjusted for pH in Spaniard’s Bay, then chlorine is boosted before it enters Upper Island Cove.

So the community is looking for assistance in addressing this issue, they do have chlorination and pH adjustment for the water, so there may be so things they can do with the existing system and possibly other practices/equipment they may need to implement as well.
Can we have someone follow up with the town from that perspective, I can assist any way possible?

Ben M. Hammond, EP  
Environmental Scientist  
Water Resources Management Division  
Department of Environment and Conservation  
P.O. Box 8700, Confederation Building  
100 Prince Phillip Drive, 4th Floor, West Block  
St. John’s, NL  
A1B 4J6  

Tel: 709.729.1157  
Fax: 709.729.0320  
benhammond@gov.nl.ca
Mr. Adams,

Further to the conversation you had regarding flushing of the water distribution system with Deneen Spracklin, here are some points of interest.

- You should always notify the public that the community will be conducting flushing of the water mains; (ensure the public is aware they may experience decreased pressure and discolored water). Let them know that after flushing is completed to open a household faucet to allow the discolored water to be removed from the service lines.
- Slightly increase the chlorine dosage level. This should ensure adequate free chlorine levels during increased flows from flushing operations.
- The operator will need to check the chlorine residuals regularly during flushing to ensure a residual is maintained.
- The system static pressure (water flow at rest) should be maintained above 20psi to ensure no areas of the water distribution system approach a negative pressure situation. Pressure lower than 20psi or a negative pressure in the system could cause a back-siphonage of containments through fractures in another section or also create a vacuum in a section of water main that could partially or fully collapse the line.

If you can ensure that these points above are being met, you should be okay and a BWA would not be required.

To effectively flush the system, always start with the first hydrant from the source. So, for Upper Island Cove this would be around the chlorine booster station. You want to flushing each hydrant until you have achieved 3 pipe length turnovers in that section of water main between the hydrant you’re flushing and the next hydrant in sequence. If the water is still discolored after 3 pipe length turnovers, continue flushing until water runs clear. The operator will have to calculate the volume of the pipe section being flushed and also determine the flow rate using a Pitot Gauge.

The high points in the system should be monitored during the flushing program, to verify system pressure isn’t dropping below 20psi.

The Town will require a number of tools in order to properly flushing the system. These include, but not limited to:

- Safety Cones
- Diffusing equipment
- Two way radios/ cell phones
- Hydrant static pressure gauge
- Pitot gauge for flow measurements
- Safety Glasses
- Safety vests
- Hydrant wrench
- Flow Charts
Ideally, Uni-Directional flushing would be the best option for flushing water mains. Unidirectional flushing is a method of flushing where the operator controls the direction of flow in the system to ensure all sections of the system are flushed and optimal flows and velocities are achieved throughout the flushing process.

The OETC offers an on-site training session and in classroom educational seminar on Water Distribution System flushing. Let me know if you would like to arrange an on-site session in the near future and we can discuss these points in more detail with the community operators.

Regards,

Darren L. Patey, B.Tech.
Environmental Scientist
Department of Environment & Conservation
Water Resources Management Division
Operator Education, Training and Certification Section
Ph: 729-7363
Fax: 729-0320
Hi George,

A water quality sample was collected by the Department of Environment and Conservation (ENVC) on August 24, 2015 from the Upper Island Cove distribution system. The pH at that time was 5.67. The results from this sample will not be available until a couple of more weeks. I will ask the lab to provide the results once they are available and update you once they have been received.

I have attached the Technical Memo that was prepared by Paula Dawe (ENVC) in November 2011. To assist in the evaluation of the Spaniard’s Bay-Upper Island Cove water system, Paula utilized a computer water quality modeling program to model the complete distribution system. This memo includes the corrective measures that could be considered to minimize the formation of HAAs and THMs. The corrective measures identified in this Technical Memo remain to be the best approach to minimizing disinfection by-products. Some of these corrective measures can be implemented with low to medium effort, while others will be long-term and costly efforts. Some of the easier to implement corrective measures have already been initiated by the Towns of Upper Island Cove and Spaniard’s Bay such as flow proportional disinfection, and regular flushing programs. The Towns may need to re-visit this document and consider whether some of the other corrective measures can be considered. This may require the assistance of an engineering consultant for some of the more difficult to implement options.

One of the corrective measures that ENVC can assist with is the optimization of chemical dosages, specifically pH adjustment. Darren Patey will organize a site visit to Upper Island Cove and Spaniard’s Bay to do an assessment of both distribution systems with regards to pH levels, and the operation of the pH system equipment. Increasing pH levels may help in minimizing the HAA levels in the distribution system. Based on the pH measured on August 26th the pH levels in your distribution system remain very low. Darren will be in touch over the next couple of weeks to arrange this visit.

Once Darren has conducted his site visit and we have received the results from the latest water quality sample, we can revisit the Technical Memo and recommended corrective measures.

Deneen

Deneen Spracklin, P.Eng.
Program Lead
Community Water and Wastewater
Water Resources Management Division
Department of Environment and Conservation
PO Box 8700
St. John's NL A1B 4J6
Phone: (709) 729-1158
Fax: (709) 729-0320
Technical Memo: DBP Causes and Possible Corrective Measures in the Spaniard's Bay-Upper Island Cove Drinking Water Distribution System

1. Background
On May 17, 2011, George Adams, Mayor of Upper Island Cove contacted the Department of Environment and Conservation (ENVC) expressing concern over the levels of disinfection by-products (DBP) in the town's drinking water. Of specific concern were the levels of HAAs and THMs most recently reported to the town by ENVC in their seasonal drinking water quality report. According to most recent available data, average THMs were 67.4 µg/L (Canadian drinking water quality guideline value is 100 µg/L) and average HAAs were 202 µg/L (Canadian drinking water quality guideline value is 80 µg/L). Over the period of record, HAA averages have always been above guideline values. THM averages have fluctuated above and below the guideline value, but have mostly remained below. The town requested help from ENVC on how to address DBP issues in their drinking water. ENVC committed to undertaking a brief review of the drinking water system to identify possible causes of DBPs and to identify appropriate corrective measures.

2. Spaniard's Bay-Upper Island Cove Drinking Water System
The Kelly’s Pond (Spider’s Pond) surface water supply provides water for both the Town of Spaniard’s Bay and the Town of Upper Island Cove. The distribution system extends from Kelly’s Pond to Spaniard’s Bay and then to Upper Island Cove. Water is pH adjusted using a soda ash system and gas chlorinated before the first user in Spaniard’s Bay. Chlorine is boosted to the system before the first user in Upper Island Cove. The installation of the pH adjustment system in 2006 has been the only major change to the drinking water system in recent years. Source water quality is average for the province with relatively low Dissolved Organic Carbon (DOC average is 3.47 mg/L), very low alkalinity (average is 2.8 mg/L), and exceedances observed in turbidity, pH, iron and manganese.

Spaniard’s Bay doses chlorine at a level that ensures required residual reading throughout the different portions of their distribution system, not just in the line that leads to Upper Island Cove. THM averages in Spaniard’s Bay have always been below the guideline value of 100 µg/L, however, HAA averages have exceeded the guideline value of 80 µg/L since 2009.

There is a certain level of cooperation between the towns concerning the operation and maintenance of the shared drinking water source. For example, operators for both towns will assist in cleaning intake screens. There has been less coordination concerning optimization of chemical dosing in the system.
3. Water Quality Modelling
To assist with evaluation of the Spaniard’s Bay-Upper Island Cove (SB-UIC) drinking water system, a simplified water quality model was developed using WatPro software. A schematic of the system is outlined in Figure 1. The model developed was used to pinpoint probable causes of DBP issues and evaluate the effectiveness of potential corrective measures. Main components of the model are the pH adjustment and gas chlorination systems, and lengths of pipe representative of i) the distance between the pH adjustment system and the primary gas chlorination system, ii) the distance between the primary chlorination system and the first user in Spaniard’s Bay, iii) the Spaniard’s Bay portion of the network, and iv) the Upper Island Cove portion of the network.

Figure 1: Schematic of the SB-UIC drinking water system

4. DBP Causes
HAA formation tends to be favoured over THM formation when water has low pH and low alkalinity. While pH and alkalinity are naturally low in the source water, the treatment train (pH adjustment, primary gas chlorine, gas chlorine booster) is also contributing to this. Chlorine gas consumes whatever alkalinity is in the water resulting in water at the tap having a lower pH than that at the source (average pH of 6.24 at source and 5.29 at the tap in Upper Island Cove). Conversely, liquid hypo-chlorination actually adds alkalinity to the water. If liquid hypo-chlorination was used in the SB-UIC system, THMs would increase slightly, and HAAs would decrease, but not below guideline levels according to the model.

The pH adjustment system is located before the primary gas chlorination system. Chlorination is more efficient at lower pH. Best practice is to locate the pH adjustment system downstream of the chlorination system far enough that primary disinfection of pathogenic organisms has occurred (ie. the chlorine has had sufficient contact time in the water to deactivate pathogenic organisms). Having the chlorination system come before the pH adjustment system will also reduce the chlorine demand caused by the added alkalinity, meaning less chlorine has to be added to the system.

By ENVC calculations, the soda ash pH adjustment system is currently dosing only 1.28 mg/L of alkalinity. In order to get a pH of 7, the pH adjustment system would need to dose between 14-21 mg/L of alkalinity with the current configuration. If pH and alkalinity were increased in the system, formation of HAAs would be reduced.

DOC would have to be reduced to less than 2 mg/L with the current system configuration in order to have HAAs less than 80 mg/L at the end of the system. DOC is not considered particularly high in this drinking water system in comparison with others. However, it is at a level and make-up that combined with the low pH, alkalinity and chlorine for disinfection, is highly favourable for HAA formation.

The SB-UIC distribution network contains over 13,600 m of pipe and several dead ends. In order to maintain residuals in some of these dead ends, primary chlorination at the beginning of the system is dosed at 3.57 mg/L, according to ENVC calculations. This is a moderate chlorine dose for a community in the province. Since the installation of the pH adjustment system, Spaniard’s Bay has had to use more chlorine in order to achieve required residuals. This is expected as the added alkalinity is creating more chlorine demand. Consequently, water being fed to Upper Island Cove from Spaniard’s Bay now has higher levels of residual free chlorine, having increased from approximately 0.3 mg/L to 0.6 mg/L. Upper Island Cove only has to dose 1.87 mg/L of chlorine at the booster station, by ENVC calculation.
The more chlorine introduced into the system overall, the higher DBP levels will be. Any reduction in the overall chlorine dosage will result in lower DBP levels. The model developed also indicates that HAA formation occurs rapidly at the beginning of the system. Introducing colder water from lower levels of the intake pond may help to slow DBP formation. Both the primary chlorination system and the booster system have had issues with their automated chlorine dosage control. Maintaining proportional flow control of the primary and booster chlorination systems will help to optimize the chlorine dosage so the towns are neither using too much or too little chlorine.

Pipe used in the distribution system is now greater than 25 years old. The majority of pipe in the network is ductile iron. Both the age and material of pipe in the network may be contributing to overall chlorine demand. The towns flush their distribution system twice a year, and pipe removed from the system has been reported to be clean with little bio-film. Water demand on the system is 907 L/p/d, by ENVC calculation. This is above average for the province and may be indicative of leakage on the system. It was to help combat leakage that the pH adjustment system was first installed.

5. DBP Corrective Measures
Options to address DBP issues in the SB-UIC drinking water system are summarized in the following table. These options are not definitive, and it is recommended an engineering consultant perform a more thorough review, option analysis and cost assessment before any major alterations to the drinking water system are made. Removal of precursors is the optimum solution to lowering DBP's in water high in natural organic content, and although other options may help, water treatment is the most effective solution.

<table>
<thead>
<tr>
<th>Option</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Optimize chemical dosage (chlorine, pH and alkalinity)</td>
<td>Model indicates that combined chemical dosage corrective measures will lower HAAs to levels just above the guideline. Moderate cost. Moderate time scale for implementation.</td>
</tr>
<tr>
<td>• Ensure automated flow proportional control of chlorine dosage</td>
<td>Low to moderate effectiveness in reducing HAAs and THMs. Must check hydraulic feasibility. Moderate cost. Moderate time scale for implementation.</td>
</tr>
<tr>
<td>• Switch from gas chlorination to liquid hypo-chlorination</td>
<td>Low to moderate effectiveness. Low cost. Moderate time scale for implementation. Must check that no adverse hydraulic effects result.</td>
</tr>
<tr>
<td>• Move pH adjustment system down-pipe of chlorination system</td>
<td>Low effectiveness. Moderate cost. Moderate time scale for implementation.</td>
</tr>
<tr>
<td>• Optimize chlorine dosage, but maintain detectable residual throughout system</td>
<td>Low to high effectiveness. Model indicates that switching to chloramines would result in HAAs below guideline levels. Use of chloramines would require either a contact tank or alternative primary disinfectant (ozone, UV). Moderate to high cost. Moderate time scale for implementation.</td>
</tr>
<tr>
<td>• Increase soda ash dosage to optimal level</td>
<td>High level of effectiveness. High cost. Long time scale for implementation.</td>
</tr>
<tr>
<td>Relocate intake to deeper, colder water</td>
<td>Low effectiveness. Moderate cost. Moderate time scale for implementation.</td>
</tr>
<tr>
<td>Regular system flushing at dead ends</td>
<td>Low to moderate effectiveness. Low cost. Moderate time scale for implementation. Must check that no adverse hydraulic effects result.</td>
</tr>
<tr>
<td>• Use daily manual flushing or a timed automated flushing device to draw water through the system at dead ends to reduce water age, increase chlorine residuals in dead ends, and reduce chlorine dosage</td>
<td>Replace old DI pipe that exerts chlorine demand</td>
</tr>
<tr>
<td>Clean, replace or reline pipe</td>
<td>Low effectiveness. Moderate cost. Moderate time scale for implementation.</td>
</tr>
<tr>
<td>Alternative disinfectants</td>
<td>Low to high effectiveness. Model indicates that switching to chloramines would result in HAAs below guideline levels. Use of chloramines would require either a contact tank or alternative primary disinfectant (ozone, UV). Moderate to high cost. Moderate time scale for implementation.</td>
</tr>
<tr>
<td>• UV, ozone, mixed oxidants, chloramines</td>
<td>To remove DOC and address other water quality issues (turbidity, pH, iron and manganese)</td>
</tr>
<tr>
<td>Water treatment plant</td>
<td>High level of effectiveness. High cost. Long time scale for implementation.</td>
</tr>
</tbody>
</table>
• Recommended treatment options include enhanced coagulation and media filtration, granular activated carbon, enhanced coagulation and microfiltration or ultrafiltration, ultrafiltration or nanofiltration, ion exchange, reverse osmosis

<table>
<thead>
<tr>
<th>Water treatment to remove HAAs at UIC</th>
<th>High level of effectiveness. May require pre-treatment. GAC would also strip out residual chlorine which would have to be re-dosed which could lead to HAA reformation. Moderate to high cost. Moderate time scale for implementation.</th>
</tr>
</thead>
<tbody>
<tr>
<td>• HAAs already formed can be removed by adsorption with an activated carbon (GAC) filter or reverse osmosis</td>
<td>Operator education and training</td>
</tr>
</tbody>
</table>

6. Summary
Although several options for corrective measures to address DBP issues have been identified for the Towns of Spaniard’s Bay and Upper Island Cove, the only certain way to ensure all DBPs are below guideline levels is drinking water treatment to remove natural organic carbon precursor material. A more practical approach may be for the town to attempt lower cost corrective measures first, assess their effectiveness, before moving on to more costly corrective measures.

More information on best management practices for the control of disinfection by-products in drinking water systems in Newfoundland and Labrador can be found at the following website: http://www.env.gov.nl.ca/env/waterres/reports/cwss/index.html

Department of Environment and Conservation staff is available to discuss the contents of this technical memo at your request.
Good Morning Neil,

Over the last few months, I have made a number of visits to both Spaniard’s Bay and Upper Island Cove (UIC) and measured the pH readings and Free Chlorine residuals. Over the last couple of years it’s been a challenge in keeping the pH readings in UIC within the recommended Guidelines for Canadian Drinking Water Quality of 6.5-8.5. Water with pH readings of below 6.5 can be very corrosive on ductile Iron pipes and copper service lines.

A technical memo, “DBP Causes and Possible Corrective Measures in the Spaniard’s Bay-Upper Island Cove Drinking Water Distribution System”, dated November 17, 2011, was sent to the Town and provided some background on both drinking water systems. This memo also outlined some possible options to address DBP issues. Some of these options included:

**Optimize chemical dosage (chlorine, pH and alkalinity)**

- Ensure automated flow proportional control of chlorine dosage. (Completed during a site visit in October, 2012.)
- Switch from gas chlorination to liquid hypo-chlorination. (Completed in 2014, but the system has not been operational. Free chlorine residual in UIC’s water distribution system is being satisfied by the Spaniard’s Bay gas chlorination system.)
- Move pH adjustment system down-pipe of chlorination system. (This option will only benefit the overall system if the pH adjustment injection point is located after the gas chlorination injection point and after contact time has been achieved.)
- Optimize chlorine dosage, but maintain detectable residual throughout the system. (This was completed during various on-site sessions from 2012-2015.)
- Increase soda ash dosage to optimal level. (This was started in 2013 with minimal increases to the stroke length of the pH adjustment metering pump at the Spaniard’s Bay chlorination facility. During the September 22, 2015 on-site pH control session, options were discussed and pH readings were recorded. I have attached an email outlining recommendations sent to the Town of Spaniard’s Bay with regard to modifications to the pH control system.)

The above options were deemed to be achievable with moderate cost and time. Other options outlined in the technical memo will require infrastructure changes and moderate to high costs to implement.

In the next couple of weeks, I will schedule a visit to both communities to record pH and residual readings and verify the effectiveness of the proposed changes to the pH system.

Please forward this information to Mr. George Adams as well.

If you would like to discuss this further, feel free to contact me.

Regards,
Darren L. Patey, B.Tech.
Environmental Scientist
Department of Environment & Conservation
Water Resources Management Division
Operator Education, Training and Certification Section
Ph: 729-7363
Fax: 729-0320
Good Morning Tony,

On September 22, I conducted residual testing and pH testing throughout Spaniard’s Bay and Upper Island Cove (UIC). Some findings are listed below.

- pH at Spaniard’s Bay Town Hall was 7.80 and free residual was 0.45mg/l (This is out of a 10” (250mm) DI waterline).
- The last house before the UIC chlorine booster station – pH was 6.80 and free residual was 1.05 (This is out of a 16” (400mm) DI waterline).
- pH at the Town Depot was 8.10.
- pH at the chlorination building was 8.44

The approximate distance between the chlorination building and the end of the 400mm waterline in UIC is 11.5km. It’s approximately 6.7km from the chlorination building to the UIC Booster Station.

The volume of water in the 11.5km - 16” waterline is approximately 1,444,400 liters or 382,116 US gallons.

Presently, the operator mixes 5 – 25kg bags of soda ash to 2650L of water for a 4.7% slurry. This slurry strength is resulting in a pH reading of below 6 at the end of the water line in UIC. With these numbers, the water in UIC is approximately 10 times more acidic then in Spaniards Bay.

A part of the issue could be the 400mm waterline that continues on to the end of UIC. According to the operators, the waterline is reduced to 250mm through the main highway in Spaniard’s Bay.

A 250mm waterline will hold approximately 4906L of water per 100m of pipe, while the 400mm waterline will hold approximately 12,560L of water per 100m pipe. Over double the capacity in a 400mm waterline. A soda ash slurry of approximately 4.7% may keep the pH readings within acceptable limits in Spaniard’s Bay’s in part due to the reduction in waterline and proximity to the pH Control facility. UIC is not meeting the recommended pH guideline of 6.5-8.5.

I recommend to increase the strength of the Soda Ash slurry to 6 – 25kg bags of soda ash to 2650L of water. This will increase the strength by approximately 1% to 5.7%. Continue monitoring the pH readings throughout the Town to ensure pH readings within 6.5-8.5.

Within a week, let me know what impact this has on the pH readings in the Town. I will be in contact with UIC during this period as well to verify the effectiveness of the increase.

Adjusting the soda ash slurry to obtain acceptable pH levels in the water distribution system is a trial and error procedure. There may need to be additional increases or decreases in slurry strength or adjustments to the metering pump stroke length before we obtain an acceptable balanced to satisfy both systems.

If you would like to discuss the matter, please don’t hesitate to call the number below.
Regards,

Darren L. Patey, B.Tech.
Environmental Scientist
Department of Environment & Conservation
Water Resources Management Division
Operator Education, Training and Certification Section
Ph: 729-7363
Fax: 729-0320
From: Patey, Darren
Sent: Friday, November 13, 2015 7:01 PM
To: Town of Spaniard's Bay
Subject: RE: pH Adjustment

Hi Tony,

The extra soda ash may slightly increase the chlorine dosage amount. Let me know the impact this increase in soda ash has on your chlorination system. Also, can you find out which chemical is injected first? Chlorine gas or soda ash?

Darren

From: Town of Spaniard's Bay [spdsbay2005@personainternet.com]
Sent: Friday, November 13, 2015 4:30 PM
To: Patey, Darren
Subject: pH Adjustment

Hi Darren;
We have a batch just mixed. We will need to do the next mix on Friday November 20. We will add 1 extra bag at that time. After settling, it should be ready for use by Nov 22/15.
What effect do you expect this to have on the residual chlorine? We will also need to increase this in order to maintain a residual at the end of the distribution system.

TONy Ryan-

----- Original Message ----- 
From: "Patey, Darren" <darrenpatey@gov.nl.ca>
To: <spaniardsbay@persona.ca>
Cc: "Spracklin, Deneen" <dspracklin@gov.nl.ca>
Sent: Tuesday, November 10, 2015 12:03 PM
Subject: pH Adjustment

> Good Morning Tony,
> 
> On September 22, I conducted residual testing and pH testing throughout 
> Spaniard's Bay and Upper Island Cove (UIC). Some findings are listed 
> below.
> 
> > - pH at Spaniard's Bay Town Hall was 7.80 and free residual was 
> > 0.45mg/l (This is out of a 10" (250mm) DI waterline).
> >
> > - The last house before the UIC chlorine booster station - pH was 
> > 6.80 and free residual was 1.05 (This is out of a 16" (400mm) DI 
> > waterline).
> >
> > - pH at the Town Depot was 8.10.
pH at the chlorination building was 8.44.

The approximate distance between the chlorination building and the end of the 400mm waterline in UIC is 11.5km. It's approximately 6.7km from the chlorination building to the UIC Booster Station.

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Presently, the operator mixes 5 - 25kg bags of soda ash to 2650L of water for a 4.7% slurry. This slurry strength is resulting in a pH reading of below 6 at the end of the water line in UIC. With these numbers, the water in UIC is approximately 10 times more acidic than in Spaniards Bay.

A part of the issue could be the 400mm waterline that continues on to the end of UIC. According to the operators, the waterline is reduced to 250mm through the main highway in Spaniard's Bay.

A 250mm waterline will hold approximately 4906L of water per 100m of pipe, while the 400mm waterline will hold approximately 12,560L of water per 100m pipe. Over double the capacity in a 400mm waterline. A soda ash slurry of approximately 4.7% may keep the pH readings within acceptable limits in Spaniard's Bay's in part due to the reduction in waterline and proximity to the pH Control facility. UIC is not meeting the recommended pH guideline of 6.5-8.5.

I recommend to increase the strength of the Soda Ash slurry to 6 - 25kg bags of soda ash to 2650L of water. This will increase the strength by approximately 1% to 5.7%. Continue monitoring the pH readings throughout the Town to ensure pH readings within 6.5-8.5.

Within a week, let me know what impact this has on the pH readings in the Town. I will be in contact with UIC during this period as well to verify the effectiveness of the increase.

Adjusting the soda ash slurry to obtain acceptable pH levels in the water distribution system is a trial and error procedure. There may need to be additional increases or decreases in slurry strength or adjustments to the metering pump stroke length before we obtain an acceptable balanced to satisfy both systems.

If you would like to discuss the matter, please don't hesitate to call the number below.

Regards,

Darren L. Patey, B.Tech.
Environmental Scientist
Department of Environment & Conservation
Water Resources Management Division
Operator Education, Training and Certification Section
Ph: 729-7363
Fax: 729-0320

“This email and any attached files are intended for the sole use of the primary and copied addressee(s) and may contain privileged and/or confidential information. Any distribution, use or copying by any means of this information is strictly prohibited. If you received this email in error, please delete it immediately and notify the sender.”

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https://www.avast.com/antivirus

---

This email has been checked for viruses by Avast antivirus software.
www.avast.com
Newfoundland Labrador

Drinking Water System Report Form 2015

BY JANUARY 31, 2016, COMPLETED FORM MUST BE SUBMITTED TO:

By Mail: Drinking Water and Wastewater Section, Water Resources Management Division
Department of Environment and Conservation, PO Box 8700, St. John’s, NL, A1B 4J6

By Fax: 709-729-0320

By email: WaterAndSewer@gov.nl.ca

*A digital copy of this form can be found at: http://www.env.gov.nl.ca/env/waterres/waste/index.html

Please fill in a form for each public drinking water system your community owns and operates.

Community Name: **Town of Upper Island Cove**

Water Supply Name: **Spider Pond**

Population Serviced: 1594

---

1. Is your water supply a designated protected area? [ ] Yes [ ] No

2. Do you undertake any monitoring or inspections of your protected water supply area? [ ] Yes [ ] No

3. What type of disinfection system is used? (Select those that apply)

   [ ] Chlorine gas
   [ ] Sodium hypochlorite (liquid)
   [ ] Calcium hypochlorite (powder)
   [ ] Mixed oxidants (MIOX, on-site generation)
   [ ] UV
   [ ] Ozone
   [ ] Chloramines
   [ ] Other- Details:

4. Are chlorine readings taken? (Select those that apply):

   [X] At the beginning of the distribution system
   [ ] Daily (Monday to Sunday)
   [X] At the end of the distribution system
   [ ] 5 days a week (Monday to Friday)
   [ ] In the middle of the distribution system
   [ ] Weekly
   [ ] Not taken/ Other- Details:

5. Do you take readings for: [ ] Free chlorine [ ] Total chlorine

6. What is the average free chlorine residual reading at the end of the distribution system in mg/L?

   [ ] 0.8

7. What other types of water treatment are used? (Select those that apply)

   [X] pH adjustment (soda ash)
   [ ] pH adjustment (lime)
   [ ] In-line micron/pressure filters
   [ ] Lead removal
   [ ] Infiltration gallery
   [ ] Arsenic removal
   [ ] Iron/manganese removal
   [ ] Other- Details:

---

Department of Environment and Conservation, Water Resources Management Division
PO Box 8700, St. John’s, NL, Canada, A1B 4J6

Need assistance filling out the form? Labrador and Western call: 709-637-2034, Central and Eastern call: 709-729-2558
8. What is the water usage for this drinking water system?

<table>
<thead>
<tr>
<th>Value Units (Example: m³/d, USGPM)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Daily Water Use</td>
</tr>
<tr>
<td>235 g/m²</td>
</tr>
<tr>
<td>Annual Maximum Day Demand*</td>
</tr>
</tbody>
</table>

* The maximum amount of water supplied to the water distribution system on any given day within a calendar year.

9. How often was the distribution system flushed in the past year?

- Never
- Once
- Twice
- Other - Please Specify:

10. Do you have a certified:

- Water distribution operator
- Water treatment plant operator

11. Is your main operator:

- Paid
- Volunteer
- No operator
- Full-time
- Part-time
- Town council member/Town clerk

12. Has a new water system operator started in the last year?

- Yes
- No

13. What is the household water (& sewer) rate charged to local residents?

- 8.75

14. What is the annual cost to operate the town's water (& sewer) system?

- 54,000.00

15. Have you experienced any water shortages during the past year?

- Yes
- No

16. Have you experienced any chemical leaks or spills, including chlorine gas leaks during the past year?

- Yes
- No

17. Were there any events that impaired drinking water quality during the past year? (Examples: contaminated water treatment chemicals, animals in the intake pond, loss of pressure, oil spill/leak, etc.)

- Yes
- No

Submitted By: Neil Stump
Date: Jan. 8/16
Position: Town Manager
Phone: 567-2573

Department of Environment and Conservation, Water Resources Management Division
PO Box 8700, St. John's, NL, Canada, A1B 4S6
Need assistance filling out the form? Labrador and Western call: 709-637-2034, Central and Eastern call: 709-729-2558
Neil,

Please pass this report along to George Adams and let Cliff know I will be in the community on Monday probably around 11:30am to record a couple of pH readings.

Thanks,

Darren L. Patey, B.Tech.
Environmental Scientist
Department of Environment & Conservation
Water Resources Management Division
Operator Education, Training and Certification Section
Ph: 729-7383
Fax: 729-0320
Potential copyright material

If you wish to obtain a copy please contact the ATIPP Office at (709) 729-7072 or atippoffice@gov.nl.ca.
Thanks for the update Tony,

I will help in any way I can. Let me know how you make out with the air release valves.

Thanks,

Darren L. Patey, B.Tech.
Environmental Scientist
Department of Environment & Conservation
Water Resources Management Division
Operator Education, Training and Certification Section
Ph: 729-7363
Fax: 729-0320

Hi Darren;
The water hammer issues have returned after approximately 1 week of stability.
We are currently testing with 1 hydrant to remain open at a high point in Town down stream of the UIC Pump Station.
So far, this has cleared up the water somewhat and I am waiting on pressure test results.
Darren. This problem may take additional time and resources to correct.

Tony Ryan
Thanks Jim.

I have contacted Sansom!

Darren L. Patey, B.Tech.
Environmental Scientist
Department of Environment & Conservation
Water Resources Management Division
Operator Education, Training and Certification Section
Ph: 729-7363
Fax: 729-0320

I just took a glance at your e-mail this morning. I think the relief you are seeing with the hydrant open in a high spot is to be expected. To me it would simulate the use of surge tanks in penstocks where the pressure build-up is relieved by the outlet through the hydrant. I think the problem is in the pumping design. Not being an expert in VFD pumps I'm not sure if they can be controlled to temper the problem or not. If not the answer may lie in using control valves to temper the delivery of the water on start up or maybe a pressure relief valve to blow off pressure when hammer occurs. Give with Sansome a call. He is their VFD man, maybe he can provide some insight for you.

J

s. 40(1)

Jim Pollett
Environmental Scientist
Department of Environment & Conservation
Provincial Building
3 Cromer Avenue
Grand Falls - Windsor NL A2A 1W9
Tel: (709) 292-4225
Fax: (709) 292-4365
email: jimpollett@gov.nl.ca

Fyi, thoughts?
Deneen,

Email Tony sent me today. By leaving the hydrant open, air is being removed in my opinion. Once the air is out; pressures return to normal for a set period of time before another pocket of air comes through the transmission main and starts the fluctuating pressure problem again. I am leaning toward entrapped air throughout the 16" transmission main seeing none of the air release valves are operating and need to be replaced. How is the air getting into the main is another question.

Darren L. Patey, B.Tech.
Environmental Scientist
Department of Environment & Conservation
Water Resources Management Division
Operator Education, Training and Certification Section
Ph: 729-7363
Fax: 729-0320

Hi Darren;
The water hammer issues have returned after approximately 1 week of stability.
We are currently testing with 1 hydrant to remain open at a high point in Town down stream of the UIC Pump Station.
So far, this has cleared up the water somewhat and I am waiting on pressure test results.
Darren. This problem may take additional time and resources to correct.

Tony Ryan
Would be cheaper to just put in a new one I figure. Cox's Cove has issues occasionally with non-functioning air relifs as well but they are usually flow as the air pocket reduces line size coming into town.

Good to hear they got I straightened out.

Gerry Lahey
Environmental Scientist
Dept. of Environment & Conservation
Water Resources Management Division
PO Box 2006
Corner Brook NF A2H 6J8
Ph: (709) 637-2035
Fax: (709) 637-2541
Cell: (709) 632-4807

Downstream, that's why they will continue monitoring the system. The air relief chamber may need to be relocated.

Darren L. Patey, B.Tech.
Environmental Scientist
Department of Environment & Conservation
Water Resources Management Division
Operator Education, Training and Certification Section
Ph: 729-7363
Fax: 729-0320

Downstream or upstream? If upstream then a functional air relief up there should have mitigated the issue. If downstream then they still have a spot to keep an eye on since an air pocket formed before it got to the valve.

Gerry Lahey
Environmental Scientist
Dept. of Environment & Conservation
Water Resources Management Division
PO Box 2006
Corner Brook NF A2H 6J8
From: Patey, Darren  
Sent: Tuesday, August 09, 2016 11:05 AM  
To: Pollett, Jim; Lahey, Gerry  
Cc: Spracklin, Deneen  
Subject: RE: Water Hammer - Spaniard's Bay and Upper Island Cove

Tony informed me the pressure fluctuations have been resolved. The operator flushed all hydrants in the community and a large air pocket was located near the beginning of the waterline. The large air pocket wasn't at the highest point, but close. Once this air pocket was removed through the nearest hydrant, the pressure fluctuations were not observed. The Town is continuing to monitor the situation, but are confident this was the source of the pressure fluctuations. Funny thing is, there was a non-operational air relief valve less than a KM downstream of where the air pocket was located. The chamber that housed the air relief valve was full of water. The Town is ordering three air relief valves for the system. Once installed, let's hope the Town is proactive with maintenance on these valves. Maybe an SOP on proper operation and maintenance of Air Relief Valves is needed.

Darren L. Patey, B.Tech.
Environmental Scientist
Department of Environment & Conservation
Water Resources Management Division
Operator Education, Training and Certification Section
Ph: 729-7363
Fax: 729-0320

From: Pollett, Jim  
Sent: Monday, July 25, 2016 9:55 AM  
To: Patey, Darren; Lahey, Gerry  
Cc: Spracklin, Deneen  
Subject: RE: Water Hammer - Spaniard's Bay and Upper Island Cove

Darren

I just took a glance at your e-mail this morning. I think the relief you are seeing with the hydrant open in a high spot is to be expected. To me it would simulate the use of surge tanks in penstocks where the pressure build-up is relieved by the outlet through the hydrant. I think the problem is in the pumping design. Not being an expert in VFD pumps I'm not sure if they can be controlled to temper the problem or not. If not the answer may lie in using control valves to temper the delivery of the water on start up or maybe a pressure relief valve to blow off pressure when hammer occurs. Give [redacted] with Sansome a call. He is their VFD man, maybe he can provide some insight for you.

Jim Pollett
Environmental Scientist
Department of Environment & Conservation
Provincial Building
3 Cromer Avenue
Grand Falls - Windsor NL A2A 1W9
Tel: (709) 292-4225
Fax: (709) 292-4365
email: jimpollett@gov.nl.ca
Fyi, thoughts?

Darren L. Patey, B.Tech.
Environmental Scientist
Department of Environment & Conservation
Water Resources Management Division
Operator Education, Training and Certification Section
Ph: 729-7363
Fax: 729-0320

---

Email Tony sent me today. By leaving the hydrant open, air is being removed in my opinion. Once the air is out, pressures return to normal for a set period of time before another pocket of air comes through the transmission main and starts the fluctuating pressure problem again. I am leaning toward entrapped air throughout the 16" transmission main seeing none of the air release valves are operating and need to be replaced. How is the air getting into the main is another question.

Darren L. Patey, B.Tech.
Environmental Scientist
Department of Environment & Conservation
Water Resources Management Division
Operator Education, Training and Certification Section
Ph: 729-7363
Fax: 729-0320

---

Hi Darren;
The water hammer issues have returned after approximately 1 week of stability.
We are currently testing with 1 hydrant to remain open at a high point in Town downstream of the UIC Pump Station.
So far, this has cleared up the water somewhat and I am waiting on pressure test results.
Darren. This problem may take additional time and resources to correct.

Tony Ryan
Hi Neil,

Is the Town e-mail townoffice@upperislandcove.ca?

Darren L. Patey, B.Tech.
Environmental Scientist
Department of Environment & Climate Change
Water Resources Management Division
Community Water and Wastewater
Ph: 729-7363
Fax: 729-0320
Hi Neil,

Just checking up on the pH levels at the Town Hall? Let me know the latest reading.

Thanks,
Darren
Keith, Debi L

From: and Sewer, Water
Sent: Wednesday, November 09, 2016 3:47 PM
To: Anchor Point; Appleton; Arnold's Cove; Badger; Baie Verte; Bay de Verde; Bay L'Argent; Bay Roberts; Beachside; Belleoram; Birchy Bay; Bird Cove; Bird Cove; Bishop's Falls; Bonavista; Botwood; Brent's Cove; Brighton; Brigus; Buchans; Burgeo; Burin; Burlington; Burnt Islands; Campbellton; Carbonear; Carmanville; Cartwright; Centreville-Wareham-Trinity; Channel-Port aux Basques; Clareville; Clarke's Beach; Come By Chance; Comfort Cove-Newstead; Conception Bay South; Corner Brook; Cottlesville; Cow Head; Cox's Cove; Cupids; Daniel's Harbour; Deer Lake; Deer Lake; Dover; Eastport; Elliston; Embree; Englee; Fermeuse; Ferryland; Fleur de Lys; Fogo Island; Forteau; Fortune; Gambo; Gander; Gamish; Gaultois; Gillams; Glenwood; Glovertown; Grand Bank; Grand Falls-Windsor; Grand Le Pierre; Greenspond; Hampden; Hampden; Hant's Harbour; Happy Adventure; Happy Valley-Goose Bay; Harbour Breton; Harbour Grace; Harbour Main-Chapel's Cove-Lakeview; Hare Bay; Hawke's Bay; Heart's Content; Heart's Delight-Islington; Heart's Desire; Hermitage-Sandyville; Holyrood; Hopedale; Humber Arm South; HVGB - Town Clerk; Indian Bay; Irishtown-Summerside; Irishtown-Summerside; Isle aux Morts; Jackson's Arm; Jason Phillips; King's Point; La Scie; Labrador City; Labrador City; Lamaline; L'Anse au Clair; L'Anse au Loup; Lawn; Leading Tickles; Lewin's Cove; Lewisporte; Little Bay; Little Bay Islands; Little Burnt Bay; Lumsden; Lushes Bight-Beaumont-Beaumont North; Main Brook; Makkovik; Mary's Harbour; Marystown; Massey Drive; McBours; Meadows; Middle Arm; Miles Cove; Millertown; Milltown-Head of Bay d'Espoir; Ming's Bight; Mount Moriah (mountmoriah@nl.rogers.com); Mount Pearl; Musgrave Harbour; Musgravetown; Nain; New Perlican; New-Wes-Valley; Nipper's Harbour; Norman's Cove-Long Cove; Norris Arm; Norris Point; Northern Arm; Northwest River; Old Perlican; Pacquet; Paradise; Parkers Cove; Parson's Pond; Pasadena - B Hudson; Peterview; Petty Harbour-Maddox Cove; Pilley's Island; Placentia; Point Leamington; Point May; Port Anson; Port aux Choix; Port Blandford; Port Hope Simpson; Port Saunders; Portugal Cove-St. Philip's; Postville; Pouch Cove; Ramea; Red Bay; Elizabeth Yetman; Red Harbour; Rencontre East; RigoléT; Robert's Arm; Rocky Harbour; Roddickton-Bide Arm; Rose Blanche; Salmon Cove; Sandringham; Seal Cove (White Bay); Seal Cove, FB; South Brook; South River; Southern Harbour; Spaniard's Bay; Springdale; St. Alban's; St. Anthony - Town Clerk; St. Bernard's-Jacques Fontaine; St. George's; St. George's; St. Jacques-Coomb's Cove; St. John's; St. Lawrence; St. Lewis; St. Lunaire-Griquet; St. Mary's; St. Pauls; St. Paul's (townofstpauls@nf.aibn.com); Steady Brook; Steady Brook (townoffice@steadybrook.com); Stephenville - Town Manager; Stephenville Crossing; Summerford; Sunnyside; Terrenceville; Torbay; Truro; Trepassey; Trinity; Trinity Bay North; Triton; Trout River; Trout River; Twillingate; Upper Island Cove; Victoria; Wabana; Wabush; West St. Modeste (townofweststmodeste@hotmail.ca); Westport; Whitbourne; Whiteway; Winterton; Woodstock; Woodstock; Woody Point; Woody Point - Town Manager
Discharge Restriction on Public Wastewater Collection and Treatment Systems.pdf

Attention: Owner of a Public Wastewater System

Please see the attached letter regarding discharge restrictions on public wastewater collection and treatment systems. If you have trouble viewing the attached letter, please respond to this email and a paper copy will be provided.
Re: Discharge Restriction on Public Wastewater Collection and Treatment Systems

Please be advised that any hauled septage, sludge or other types of hazardous or deleterious liquids must not be discharged to a public wastewater system. A public wastewater system is defined as a wastewater system (collection and/or treatment) that is owned and operated by a municipality or Local Service District. The discharge of the above substances to a public wastewater system is not allowed under the Environmental Control Water and Sewage Regulations, 2003. If you are the owner of a public wastewater system you must not accept or permit the above substances to be discharged to your system.

As per Section 38(2) of the Water Resources Act SNL 2002 cW-4.01, all sewage works in the province shall at all times be operated and maintained in a manner and with those facilities as may be directed by the Minister. Public wastewater systems are not designed to receive hauled septage, sludge or other deleterious liquids. The discharge of such substances can cause critical operational issues that require increased maintenance on wastewater systems. Permits to Operate for public wastewater systems that are issued by the Department of Environment and Climate Change under Section 38 of the Water Resources Act will be updated in the future to reflect this restriction.

If you require additional guidance regarding this issue please do not hesitate to contact this Department at 729-2558 for communities in the Eastern and Central regions and 637-2034 for communities in the Western and Labrador regions.

Yours truly,

Paula Dawe
Manager
Drinking Water & Wastewater

November 9, 2016

Owner of a Public Wastewater System:

Paula Dawe
P.Eng.
Subject: Requirements for Drinking Water Treatment Chemicals
Attachments: NSF ANSI 60 Requirement for WT Chemicals.pdf

Please find attached, correspondence regarding the use of chemicals in the operation and maintenance of a public drinking water system. The attached letter is a reminder that any chemical that is used in the operation and maintenance of a public drinking water system must be NSF/ANSI 60 certified. This applies to chemicals used in the disinfection of drinking water, including chlorine gas, sodium hypochlorite (liquid), Calcium hypochlorite (powder), and chemicals used as part of other drinking water treatment processes. For further direction, please see attached letter.

If you have trouble viewing the attachment, please let me know and a hard copy will be mailed.

Community Water & Wastewater Program
Water Resources Management Division
Department of Environment and Climate Change
PO Box 8700
St. John’s NL A1B 4J6
waterandsewer@gov.nl.ca
Newfoundland
Labrador

Government of Newfoundland and Labrador
Department of Environment and Climate Change
Water Resources Management Division

December 22, 2016

Owner of a Public Drinking Water System

Re: NSF/ANSI 60: Drinking Water Treatment Chemicals

Please be advised that any chemical used in the operation and maintenance of a public drinking water system must be NSF/ANSI 60 certified. This certification ensures that the chemical meets minimum health effects criteria and is safe for consumption in drinking water. This requirement applies to chemicals used in the disinfection of drinking water, including chlorine gas, sodium hypochlorite (liquid), calcium hypochlorite (powder), and chemicals used as part of other drinking water treatment processes. Using NSF/ANSI 60 certified water treatment chemicals is a regulatory requirement for public drinking water systems. The following term is included in all Permits to Operate that have been issued by the Department of Environment and Climate Change to public drinking water system owners:

"The owner shall ensure that all chemicals and materials used in the operation of the drinking water system that come into contact with water within the system shall meet all applicable standards set by both the American Water Works Association (AWWA) and the American National Standards Institute (ANSI) safety criteria standards NSF/60 or NSF/61."

Similar chemicals to those listed above are available for purchase from suppliers that are not NSF/ANSI 60 certified nor intended for use in drinking water. These chemicals are intended for purposes such as sanitizing swimming pools or industrial cleaning applications. It is the responsibility of the public drinking water system owner to ensure that all chemicals that are ordered and received are NSF/ANSI 60 certified and display the NSF logo on the chemical container. The chemical supplier must be able to provide documentation to buyers that the chemical is NSF/ANSI 60 certified and must also provide the Materials Safety Data Sheet or Safety Data Sheet.

If you require additional guidance regarding this issue please do not hesitate to contact Genny DeCoste at 729-2558 for communities in the Eastern or Central regions, and Chris Blanchard at 637-2034 for communities in the Western and Labrador regions.

Yours truly,

Paula Dawe P.Eng.
Manager
Drinking Water & Wastewater
From: Debi L
Sent: Tuesday, January 10, 2017 10:20 AM
To: and Sewer, Water

Admirals Beach; Anchor Point; Appleton; Aquaforte; Arnold's Cove; Avondale; Badger; Baie Verte; Baine Harbour; Bauline; Bay de Verde; Bay L'Argent; Bay Roberts; Bay St. George South (2); Bay St. George South; Beachside; Belleoram; Birchy Bay; Bird Cove; Bishop's Falls; Blaketown; Bonavista; Botwood; Branch; Brent's Cove; Brighton; Brigus; Bryant's Cove; Buchans; Burynan's Cove; Burgeo; Burgoyne's Cove; Burin; Burlington; Burnt Island; Campbellton; Cape St. George; Carbonear; Carmanville; Cartwright; Cavendish; Centreville-Wareham-Trinity; Chance Cove; Change Islands; Channel-Port aux Basques; Charlottetown; Clareville; Clarke's Beach; Colliers; Come By Chance; Comfort Cove-Newstead; Conception Bay South; Conception Harbour; Conche; Cook's Harbour; Corner Brook; Cottlesville; Cottrell's Cove; Cow Head; Cox's Cove; Cupids; Daniel's Harbour; Deep Bight; Deer Lake; Dover; Eastport; Eliston; Embree; Englee; Fermeuse; Ferryland; Flat Bay; Fleur de Lys; Flower's Cove; Fogo Island; Forteau; Fortune; Frenchman's Cove; Gallants; Gambo; Gander; Garnish; Gaskiers; Gaulois; George's Brook-Milton; Georgetown; Gillams; Glenburnie; Glenwood; Glovertown; Grand Bank; Grand Falls-Windsor; Grand Le Pierre; Grates Cove; Greenspond; Hampden; Hant's Harbour; Happy Adventure; Happy Valley-Goose Bay; Harbour Breton; Harbour Grace; Harbour Main-Chapel's Cove-Lakeview; Hare Bay; Hawke's Bay; Heart's Content; Heart's Delight-Islington; Heart's Desire; Hermitage-Sandyville; Hickman's Harbour-Robinson Right; Holyrood; Hopedale; Howley; Hughes Brook; Humber Arm South; Indian Bay; Irishtown-Summerside; Isle aux Morts; Jackson's Arm (townofjackson@xplornet.ca); King's Point; Kippens; La Scie; Labrador City; Lamaline; L'Anse au Clair; L'Anse au Loup; Lawn; Leading Tickle; Lewin's Cove; Lewisporte; Little Bay; Little Bay Islands; Little Burnt Bay; Long Harbour-Mount Arlington Heights; Lourdes; Lumsden; Lushes Bight-Beaumont-Beaumont North; Main Brook; Makinsons; Makkovik; Mary's Harbour; Marystown; Massey Drive; Mclver's; Meadows; Middle Arm; Miles Cove; Millertown; Milltown-Head of Bay d'Espoir; Ming's Bight; Morrisville; Mount Moriah (mountmoriah@nl.rogers.com); Mount Pearl; Musgrave Harbour; Musgravetown; Nain; New Perlican; New-Wes-Valley; Nippers Harbour; Norman's Cove-Long Cove; Norris Arm; Norris Point; Northern Arm; Northwest River; Old Perlican; Pacquet; Paradise; Parker's Cove; Parson's Pond; Pasadena - B Hudson; Peterivew; Petty Harbour-Maddox Cove; Picaddilly Slant-Abraham's Cove; Pilley's Island; Placentia; Point Lance; Point Leamington; Point May; Pool's Cove; Port Anson; Port au Port East; Port au Port West; Port aux Chois; Port Blandford; Port Hope Simpson; Port Kirwan; Port Rexton; Port Saunders; Portland Creek; Portugal Cove South; Portugal Cove-St. Phillips (Leah.Power@pcsp.ca); Postville; Pouch Cove; Raleigh; Ramea; Random Sound West; Red Bay Elizabeth Yetman; Red Harbour; Reidville; Renews-Cappahayden; Rigolet; River of Ponds (townofriverofponds@nf.aibn.com); Robert's Arm; Rocky Harbour - D Reid; Roddickton-Bide Arm; Rose Blanche; Rushoon; Salmon Cove; Salvage; Sandringham; Sandy Cove; Seal Cove (White Bay); Small Point-Adam's Cove-Blackhead-Broad Cove; South Brook; South River; Southern Harbour; Spaniard's Bay; Springdale; St. Alban's; St. Anthony - Town Clerk; St. Anthony Bight; St. Bernard's-Jacques Fontaine; St. Bride's; St. George's; St. John's; St. Joseph's; St. Lawrence; St. Lewis; St. Lunaire-Griquet; St. Mary's; St. Pauls; St. Shott's; Steady Brook; Stephenville - Town Manager; Stephenville Crossing; Straitsview; Summerford; Sunnyside; Swift Current; Terrenceville (terrencevilletown2204@eastlink.ca); Tizzard's Harbour; Torbay; Trepassay; Trinity; Trinity Bay North; Triton; Trout River; Twillingate; Upper Amherst Cove; Upper Island Cove; Victoria; Wabana; Wabush; West St. Modeste (townofweststmodeste@hotmail.ca); Westport; Whitbourne; Whiteway; Winterland;
The Department of Environment and Climate Change will be delivering the **2017 Clean and Safe Drinking Water Workshop** on March 28 to 30, 2017 at the Hotel Gander. Please find attached the registration letter/form, and a draft schedule of events. These items will also be posted to our website in the coming days. Make sure to visit our website regularly as a more detailed schedule will be posted as preparations for the workshop are finalized. [http://www.env.gov.nl.ca/env/waterres/training/Drinking_Water_Workshop/index.html](http://www.env.gov.nl.ca/env/waterres/training/Drinking_Water_Workshop/index.html)

Also attached to this email is the Municipal Training Financial Assistance Fund Application which will be needed to avail of the training subsidy from the Department of Municipal Affairs.

If you have any questions about the workshop, or have trouble viewing the attachments, please contact Jim Pollett at the following:
Email: jimpollett@gov.nl.ca
Phone: (709) 292-4225
Fax: (709) 292-4365
2017 Clean and Safe Drinking Water Workshop

The Department of Environment and Climate Change will be hosting the 2017 Clean and Safe Drinking Water Workshop, March 28 to 30, at the Hotel Gander. This workshop will be of interest to water system operators, municipal administrators and elected officials. The event will consist of technical presentations and hands-on demonstrations covering various operation and maintenance activities, and treatment options that are vital to ensuring the delivery of clean and safe drinking water to our residents. A tradeshow exhibition will be held on March 28 and 29. Workshop attendees will have an opportunity to meet with equipment suppliers to learn about their technologies and services.

The following is a list of the confirmed presentations and hands-on demonstrations being offered this year, with more to be added during final preparations:

Presentations:
- Handling Leaky Chlorine Gas Cylinders
- Ten Ways to Murder Your Pump
- Town of Brighton Dam Repair Project
- Taste and Odour Issues in Drinking Water
- Weird Stuff in Water
- Implementation of BWA Standard Operating Procedures
- Automated Hydrant Flushing
- Distribution System Pressure Monitoring
- Groundwater: NL Case Studies
- Preparing for a Water Treatment Plant: Town of Long Harbour Case Study
- Regional Water/Wastewater Operator Pilot Project

Hands-on Demonstrations:
- Dismantling Joints and Abandonment Clamp
- Megacut Tapping Machine

Please revisit our website regularly for updates as more workshop details are finalized: www.env.gov.nl.ca/env/waterres/training/Drinking_Water_Workshop

There is no registration fee for this workshop; however participants must register by completing the attached Registration Form and returning it to the address identified on the form. Participants will be responsible for arranging their own transportation, meals and accommodation.

The Department of Municipal Affairs will continue with its policy of providing a subsidy to Municipalities and Local Service Districts to offset expenses associated with attending the workshop. For communities located on the island portion of the province, the subsidy will be up to $400.00 per community. For communities in Labrador, the subsidy will be up to $700.00 per community. If you plan on availing of the subsidy, notify the following contacts with the Department of Municipal Affairs:
Following the workshop, claims for the subsidy must be directed to the Department of Municipal Affairs as noted on the attached Municipal Training Financial Assistance Fund Application.

For further information regarding this workshop please contact me by phone (709-292-4225), fax (709-292-4365), or email (jimpollett@gov.nl.ca). We look forward to seeing you at the workshop!

Regards,

Jim Pollett
Operator Education, Training and Certification Program
Registration Form

2017 Clean and Safe Drinking Water Workshop

March 28 to 30, 2017
Hotel Gander, Gander, NL

Name of Person(s) Attending:

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

Organization
Mailing Address
City/Town
Province
Postal Code
Phone
Fax
Email

***There will be no registration fee for this workshop; however participants are required to make their own arrangements for transportation, accommodation and meals.

Please return form by email, mail, or fax to:
Ms. Catherine Boone
Water Resources Management Division
Department of Environment and Climate Change
3 Cromer Avenue
Grand Falls-Windsor NL A2A 1W9
Fax: (709) 292-4365
Email: catherineboone@gov.nl.ca
2017 Clean and Safe Drinking Water Workshop

Schedule of Events

Monday, March 27, 2017
6:00 to 8:00 pm – Early Registration and Tradeshow Set-up

Tuesday, March 28, 2017
8:00 am – Registration
9:00 am – Sessions Start – Opening Address
9:10 am – Keynote Speaker
3:00 pm – Hands-on Demonstrations Start
4:00 pm – Hands-on Demonstrations End
7:00 pm – Tradeshow Reception

Wednesday, March 29, 2017
9:00 am – Sessions Start
Presentation of Operator of the Year Awards
3:00 pm – Hands-on Demonstrations Start
4:00 pm – Hands-on Demonstrations End

Thursday, March 30, 2017
9:00 am – Sessions Start
12:00 pm – Workshop Ends
12:00 pm – Prize Giveaway
**Winners of both prizes (Tablet and Drill Set) must be in attendance at the time of the draw to be eligible.

Please revisit our website as the schedule will be updated as more workshop details are finalized:
www.env.gov.nl.ca/env/waterres/training/Drinking_Water_Workshop

Newfoundland
Labrador
# Municipal Training Financial Assistance Fund Application

## Contact Information

Name of Municipality:  
Municipal Address:  
Contact Person:  
Telephone:  
Fax:  
E-mail:  

## Training Activity Information

Name of Attendee:  
Name of Activity: Clean and Safe Drinking Water Workshop  
Date(s) of Activity: March 28-30, 2017  
Location(s): Gander  
Sponsoring Group: Change, Water Resources Management Division.  

Brief Description of Activity:  
Annual workshop to provide water system operators and owners with technical information on the operation and maintenance of drinking water systems.

## Statement of Expenses

<table>
<thead>
<tr>
<th>Description</th>
<th>Quantity</th>
<th>Cost per Item</th>
<th>Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meals</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td># of Breakfasts</td>
<td>x</td>
<td>$8.00</td>
<td></td>
</tr>
<tr>
<td># of Lunches</td>
<td>x</td>
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</tr>
<tr>
<td># of Dinners</td>
<td>x</td>
<td>$21.70</td>
<td></td>
</tr>
<tr>
<td>Accommodations</td>
<td></td>
<td></td>
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<tr>
<td># of Nights</td>
<td>x</td>
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<tr>
<td>Travel</td>
<td># of KM</td>
<td>Current Basic Rate*</td>
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<tr>
<td>Other Costs:</td>
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<td></td>
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<tr>
<td>Other Costs: (e.g. Airfare and taxi)</td>
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<tr>
<td>Other Costs: (e.g. Texts, Course Materials)</td>
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</tbody>
</table>

**TOTAL COSTS:**

This verifies that council has reviewed this application, agrees to its accuracy and authorizes its submission for reimbursement.

Print Name:  
Position:  
Signature:  

**IMPORTANT:** Claims must be submitted one month after the completion of your training.

Send application & all supporting documents to:  
Fax: (709) 729-3605  
Mail Municipal Finance Division,  
Department of Municipal Affairs  
4th Floor West Block, Confederation Bldg  
P.O. Box 8700, St. John's, NL A1B 4J6  

For Office Use Only:

Special Assistance amount:  
Reimbursement of remaining costs  
Total Claim Amount:  
Processed By:  
Approved By:  

Funding for the Clean and Safe Drinking Water Workshop is in addition to the maximum Municipal Training Financial Assistance Fund reimbursement of $1000 per year per municipality. Additional funding for this training is $400 (Island) and $700 (Labrador).
Keith, Debi L

From: Keith, Debi L
Sent: Thursday, January 12, 2017 9:35 AM
To:

Trinity; Town Manager; D Reid; Roddickton-Bide Arm; Rose Goose Bay'; Harbour Breton; Harbour Grace; Harbour Grates Grand Bank; Grand Falls-Windsor (khutchinson@townofgfw.com); Grand Le Thursday, January 12, Arlington Admirals Beach; Anchor Fermeuse; Ferryland; Fortune; Frenchman's Hermitage - Sandyville; 'Hickman's Harbour-Robinson Bight'; Holyrood; Hopedale; Howley; Hughes Brook; Humber Arm South; Indian Bay; Irishtown-Summiserside; Isle aux Morts; Jackson's Arm (townofjackson@xplornet.ca); 'King's Point '; 'Kippens '; La Scie; 'Labrador City'; Lameine; L'Anse au Clair; L'Anse au Loup; Lawn; Leading Tickles; Lewin's Cove; Lewisporte; Little Bay; Little Bay Islands; Little Harbour; Long Harbour-Mount Arlington Heights; Lourdes; Lumsden; Lushes Bight-Beaufort-Beaufort North; Main Brook; 'Makinsons'; Makkovik; Mary's Harbour; Marystown; Massey Drive; Mclvers; Meadows; Middle Arm; Miles Cove; Millertown; Milltown-Head Bay d'Espar; Ming's Bight; Morrisville; Mount Moriah (mountmoriah@nl.rogers.com); 'Mount Pearl'; Musgrave Harbour; 'Musgravetown'; Nain; New Perlican; New-Wes-Valley; Nippers Harbour; Norman's Cove-Long Cove; Norris Arm; Norris Point; Northern Arm; Northwest River; Old Perlican; Pacquet; Paradise; Parkers Cove; Parson's Pond; Pasadena - B Hudson; Peterview; Petty Harbour-Maddox Cove; 'Picaddily Slant-Abraham's Cove'; Pilley's Island; Placentia; 'Point Lance'; Point Leamington; Point May; Pool's Cove; Port Anson; Port au Port East; Port au Port West; 'Port aux Choix'; Port Blandford; Port Hope Simpson; Port Kirwan; Port Rexton; Port Saunders; Portland Creek; Portugal Cove South; 'Portugal Cove-St. Phillip's (Leah.Power@pcsp.ca)'; Postville; Pouch Cove; Raleigh; Ramea; Random Sound West; Red Bay Elizabeth Yetman; Red Harbour; Reidville; Renews-Cappahayden; 'Rigolet'; River of Ponds (townofriverofponds@nf.aibn.com); Robert's Arm; Rocky Harbour - D Reid; Roddickton-Bide Arm; Rose Blanche; Rushoon; Salmon Cove; Salvage; Sandringham; Sandy Cove; Seal Cove (White Bay); Small Point-Adam's Cove-Blackhead-Broad Cove; South Brook; South River; 'Southern Harbour'; 'Spaniard's Bay '; 'Springdale'; St. Alban's; St. Anthony - Town Clerk; 'St. Anthony Bight'; St. Bernard's-Jacques Fontaine; St. Bride's; 'St. George's'; St. John's; St. Joseph's; St. Lawrence; St. Lewis; St. Lunare-Griquet; St. Mary's; St. Pauls; St. Shott's; Steady Brook; Stephenville - Town Manager; Stephenville Crossing; 'Straitsview'; Summerford; Sunnyside; 'Swift Current'; 'Terrenceville (terrencevilletown2204@eastlink.ca)'; 'Tizzard's Harbour'; 'Torbay'; Trepassey; Trinity; Trinity Bay North; Triton; Trout River; Twillingate; Upper Amherst Cove; Upper Island Cove; Victoria; 'Wabana'; Wabush; West St. Modeste (townofweststmodeste@hotmail.ca); Westport; Whitbourne; Whiteway; Winterland;
The Department of Environment and Climate Change are once again requesting communities to submit an annual Drinking Water System Report Form. The form includes 18 questions about your drinking water system for the year of 2016. The form should be completed and returned by February 10, 2017 to:

Drinking Water and Wastewater Section
Water Resources Management Division
Department of Environment and Climate Change
PO Box 8700
St. John's NL A1B 4J6
Email: WaterAndSewer@gov.nl.ca
Fax: (709) 729-0320

There are two versions of the form attached for your convenience. There is a print version of the form attached that you can print and complete by hand, and there is also a digital version attached. ECC has also provided an example form that has been completed to provide guidance on completing your report form. If you have any questions on the Drinking Water System Report Form please contact the following:

**Western and Labrador Regions:**
Chris Blanchard
Phone: (709) 637-2034
Email: cblancha@gov.nl.ca

**Eastern and Central Regions:**
Genny DeCoste
Phone: (709) 729-2558
gennydecoste@gov.nl.ca
BY FEBRUARY 10, 2017, COMPLETED FORM MUST BE SUBMITTED TO:

By Mail: Drinking Water and Wastewater Section, Water Resources Management Division
Department of Environment and Climate Change, PO Box 8700, St. John’s, NL, A1B 4J6

By Fax: 709-729-0320

By email: WaterAndSewer@gov.nl.ca

*A digital copy of this form can be found at: http://www.env.gov.nl.ca/env/waterres/waste/index.html

Please fill in a form for each public drinking water system your community owns and operates.

Community Name: 
Water Supply Name: 
LGP #: 
Water Supply Number*: 
Serviced Area Number*: 
Serviced Area Name*: 
Population Serviced: 

*To be filled in by ECC

1. Do you have signs on all access routes (i.e., trails, roads) into your protected water supply area? □ Yes □ No

2. Do you need additional protected water supply area signs? □ Yes □ No

3. Was there any non-permitted activity within the protected water supply area during the past year that your community had to address? □ Yes □ No

Details:

4. How old is your drinking water disinfection equipment? Details:

5. If you use chlorine for drinking water disinfection, what type of chlorine do you use? (Select those that apply)
   □ Chlorine gas
   □ Sodium hypochlorite (liquid)
   □ Calcium hypochlorite (powder)
   □ Mixed oxidants (MIOX, on-site generation)
   □ None- don’t chlorinate
   □ Other- Details:

6. What type of pH adjustment chemical do you use for drinking water treatment? (Select those that apply)
   □ Sodium carbonate (soda ash)
   □ Calcium hydroxide (lime)
   □ Sodium hydroxide (caustic soda)
   □ Limestone
   □ None
   □ Other- Details:

7. Do you monitor the pH of your drinking water? □ Yes □ No

At what frequency? □ Continuously □ Daily □ 5 days/week □ Weekly □ Monthly □ Never

Where? □ At the pumphouse □ In the distribution systems □ Treatment plant

8. Do chemicals used in drinking water treatment meet NSF/ANSI 60 standards for drinking water treatment chemicals:
   □ Yes □ No □ I don’t know what the NSF/ANSI 60 standard is

9. Do you have Material Safety Data Sheets (MSDS)/Safety Data Sheets (SDS) available for all drinking water treatment chemicals:
   □ Yes □ No □ I don’t know what MSDS/SDS are

10. What is the metered water usage for this drinking water system during the past year?

<table>
<thead>
<tr>
<th>Value</th>
<th>Units (Example- m³/d, USGPM)</th>
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</table>

11. What type of hydrants are on your distribution system?  □ Fire hydrants  □ Flushing hydrants  □ None
   At what frequency are hydrants inspected?  □ Twice a year  □ Annually  □ Never

12. Are any hydrants on the distribution system open continuously to increase water flow through the system?
   □ Yes  □ No

13. What is average pressure in the distribution system?

<table>
<thead>
<tr>
<th>Value</th>
<th>Units (Example- psi, kPa)</th>
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<tbody>
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</table>

14. What type of pressure control valves do you have on the distribution system? (Select those that apply)
   □ Pressure reducing valves  □ Pressure sustaining valves
   □ Pressure relief valves  □ None

15. Has a new water system operator started in the last year?
   □ Yes  □ No  Name:

16. What is the total estimated value of all your community’s public drinking water system assets (i.e., pipes, pumps, treatment, tanks, etc.)?

17. What percentage of households connected to the public drinking water system do not pay their annual water (and sewer) fees?

18. Have there been any issues with the drinking water system this past year? Please describe. (Examples- water shortage, chlorine gas leak, contamination event, water supply dam failure, animals in the intake pond, etc.)
   Details:

Submitted By:  Position:
Date:  Phone:

Department of Environment and Climate Change, Water Resources Management Division
PO Box 8700, St. John’s, NL, Canada, A1B 4J6
Need assistance filling out the form? Labrador and Western call: 709-637-2034, Central and Eastern call: 709-729-2558
# Drinking Water System Report Form 2016

**BY FEBRUARY 10, 2017, COMPLETED FORM MUST BE SUBMITTED TO:**

**By Mail:** Drinking Water and Wastewater Section, Water Resources Management Division  
Department of Environment and Climate Change, PO Box 8700, St. John's, NL, A1B 4J6  
**By Fax:** 709-729-0320  
**By email:** WaterAndSewer@gov.nl.ca  
* A digital copy of this form can be found at: [http://www.env.gov.nl.ca/env/waterres/waste/index.html](http://www.env.gov.nl.ca/env/waterres/waste/index.html)

Please fill in a form for each public drinking water system your community owns and operates.

<table>
<thead>
<tr>
<th>Community Name</th>
<th>LGP #:</th>
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<table>
<thead>
<tr>
<th>Water Supply Name</th>
<th>Water Supply Number:</th>
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<table>
<thead>
<tr>
<th>Serviced Area Number:</th>
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<tr>
<th>Serviced Area Name:</th>
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<table>
<thead>
<tr>
<th>Population Serviced:</th>
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</tbody>
</table>

*To be filled in by ECC*

1. Do you have signs on all access routes (i.e., trails, roads) into your protected water supply area?  
   - Yes  
   - No

2. Do you need additional protected water supply area signs?  
   - Yes  
   - No

3. Was there any non-permitted activity within the protected water supply area during the past year that your community had to address?  
   - Yes  
   - No  
   Details: ________________________

4. How old is your drinking water disinfection equipment?  
   Details: ________________________

5. If you use chlorine for drinking water disinfection, what type of chlorine do you use? (Select those that apply)  
   - Chlorine gas  
   - Sodium hypochlorite (liquid)  
   - Calcium hypochlorite (powder)  
   - Mixed oxidants (MIOX, on-site generation)  
   - None - don’t chlorinate  
   - Other - Details: ________________________

6. What type of pH adjustment chemical do you use for drinking water treatment? (Select those that apply)  
   - Sodium carbonate (soda ash)  
   - Calcium hydroxide (lime)  
   - Sodium hydroxide (caustic soda)  
   - Limestone  
   - None  
   - Other - Details: ________________________

7. Do you monitor the pH of your drinking water?  
   - Yes  
   - No  
   At what frequency?  
     - Continuously  
     - Daily  
     - 5 days/week  
     - Weekly  
     - Monthly  
     - Never  
   Where?  
     - At the pumphouse  
     - In the distribution systems  
     - Treatment plant

8. Do chemicals used in drinking water treatment meet NSF/ANSI 60 standards for drinking water treatment chemicals?  
   - Yes  
   - No  
   - I don’t know what the NSF/ANSI 60 standard is

9. Do you have Material Safety Data Sheets (MSDS)/Safety Data Sheets (SDS) available for all drinking water treatment chemicals?  
   - Yes  
   - No  
   - I don’t know what MSDS/SDS are.
10. What is the metered water usage for this drinking water system during the past year?

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>Units (Example- m³/d, USGPM)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Daily Water Use</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Annual Maximum Day Demand*</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* The maximum amount of water supplied to the water distribution system on any given day within a calendar year.

11. What type of hydrants are on your distribution system?  □ Fire hydrants  □ Flushing hydrants  □ None
   At what frequency are hydrants inspected?  □ Twice a year  □ Annually  □ Never

12. Are any hydrants on the distribution system open continuously to increase water flow through the system?
   □ Yes  □ No

13. What is average pressure in the distribution system?

<table>
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<tr>
<th></th>
<th>Value</th>
<th>Units (Example- psi, kPa)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Pressure at the High Elevation Point</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average Pressure at the Low Elevation Point</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* High and low elevation points occur in the distribution system after the first point of use.

14. What type of pressure control valves do you have on the distribution system? (Select those that apply)
   □ Pressure reducing valves  □ Pressure sustaining valves  □ Pressure relief valves  □ None

15. Has a new water system operator started in the last year?
   □ Yes  □ No  Name:

16. What is the total estimated value of all your community's public drinking water system assets (i.e., pipes, pumps, treatment, tanks, etc.)?

17. What percentage of households connected to the public drinking water system do not pay their annual water (and sewer) fees?

18. Have there been any issues with the drinking water system this past year? Please describe. (Examples- water shortage, chlorine gas leak, contamination event, water supply dam failure, animals in the intake pond, etc.)
   Details:

Submitted By:  Position:
Date:  Phone:

Department of Environment and Climate Change, Water Resources Management Division
PO Box 8700, St. John's, NL, Canada, A1B 4J6
Need assistance filling out the form? Labrador and Western call: 709-637-2034, Central and Eastern call: 709-729-2558

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NEWFO IdAND LabRDor
Drinking Water System Report Form 2016

BY FEBRUARY 10, 2017, COMPLETED FORM MUST BE SUBMITTED TO:

By Mail: Drinking Water and Wastewater Section, Water Resources Management Division
Department of Environment and Climate Change, PO Box 8700, St. John’s, NL, A1B 4J6
By Fax: 709-729-0320
By email: WaterAndSewer@gov.nl.ca

*A digital copy of this form can be found at: http://www.env.gov.nl.ca/env/waterres/waste/index.html

Please fill in a form for each public drinking water system your community owns and operates.

Community Name: Tiptop Cove
Water Supply Name: Round Pond
Population Serviced: 1536

1. Do you have signs on all access routes (i.e., trails, roads) into your protected water supply area? □ Yes □ No

2. Do you need additional protected water supply area signs? □ Yes □ No

3. Was there any non-permitted activity within the protected water supply area during the past year that your community had to address? □ Yes □ No
Details: 2 Illegal cabins next to Round Pond

4. How old is your drinking water disinfection equipment? Details: 15 years old

5. If you use chlorine for drinking water disinfection, what type of chlorine do you use? (Select those that apply)
□ Chlorine gas
□ Sodium hypochlorite (liquid)
□ Calcium hypochlorite (powder)
□ Mixed oxidants (MIOX, on-site generation)
□ None- don't chlorinate
□ Other- Details:

6. What type of pH adjustment chemical do you use for drinking water treatment? (Select those that apply)
□ Sodium carbonate (soda ash)
□ Calcium hydroxide (lime)
□ Sodium hydroxide (caustic soda)
□ Limestone
□ None
□ Other- Details:

7. Do you monitor the pH of your drinking water? □ Yes □ No
At what frequency? □ Continuously □ Daily □ 5 days/week □ Weekly □ Monthly □ Never
Where? □ At the pumphouse □ In the distribution systems □ Treatment plant

8. Do chemicals used in drinking water treatment meet NSF/ANSI 60 standards for drinking water treatment chemicals: □ Yes □ No □ I don't know what the NSF/ANSI 60 standard is

9. Do you have Material Safety Data Sheets (MSDS)/Safety Data Sheets (SDS) available for all drinking water treatment chemicals: □ Yes □ No □ I don't know what MSDS/SDS are

10. What is the metered water usage for this drinking water system during the past year?

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<th>Value</th>
<th>Units (Example- m³/d, USGPM)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Daily Water Use</td>
<td>182</td>
<td>m³/d</td>
</tr>
<tr>
<td>Annual Maximum Day Demand*</td>
<td>789</td>
<td>m³/d</td>
</tr>
</tbody>
</table>

* The maximum amount of water supplied to the water distribution system on any given day within a calendar year.

11. What type of hydrants are on your distribution system?  
- Fire hydrants
- Flushing hydrants
- None

At what frequency are hydrants inspected?  
- Twice a year
- Annually
- Never

12. Are any hydrants on the distribution system open continuously to increase water flow through the system?  
- Yes
- No

13. What is average pressure in the distribution system?

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>Units (Example- psi, kPa)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Pressure at the High Elevation Point</td>
<td>25</td>
<td>psi</td>
</tr>
<tr>
<td>Average Pressure at the Low Elevation Point</td>
<td>58</td>
<td>psi</td>
</tr>
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* High and low elevation points occur in the distribution system after the first point of use.

14. What type of pressure control valves do you have on the distribution system? (Select those that apply)
- Pressure reducing valves
- Pressure sustaining valves
- Pressure relief valves
- None

15. Has a new water system operator started in the last year?  
- Yes
- No

Name: Tim Snow

16. What is the total estimated value of all your community's public drinking water system assets (i.e., pipes, pumps, treatment, tanks, etc.)?  
$1.2 million

17. What percentage of households connected to the public drinking water system do not pay their annual water (and sewer) fees?  
5%

18. Have there been any issues with the drinking water system this past year? Please describe. (Examples- water shortage, chlorine gas leak, contamination event, water supply dam failure, animals in the intake pond, etc.)

Details: Water shortage for 2 days when the pumps when down and the water storage tank was emptied. Beavers in the intake pond had to be removed. High rainfall and runoff from the remnants of Hurricane Matthew lead to an increase in turbidity. Water has been very coloured during the wet fall.

Submitted By: Tina Reed  
Position: Town Manager  
Date: Jan 3, 2017  
Phone: 756-9634
Once again, the Department of Environment and Climate Change will be recognizing the outstanding dedication of drinking water system operators through the presentation of the Operator of the Year Award. The awards process includes two categories:

- Operator of the Year; and
- Volunteer Operator of the Year.

Deserving operators will have demonstrated ingenuity, proficiency, dedication and professionalism in the operation of their drinking water system. If you feel your community’s operator is deserving of such an award please consider submitting a nomination. The attached file includes more details pertaining to the award and nomination process.

**Nominations are due by 4:30 pm on February 28, 2017.**

If you have any questions, please let me know.

Deneen Spracklin, P.Eng.
Program Lead – Community Water & Wastewater
Water Resources Management Division
Department of Environment and Climate Change
PO Box 8700
St. John’s NL A1B 4J6
Phone: (709)729-1158
Fax: (709)729-0320
Operator of the Year Award 2017

In order to recognize the outstanding dedication of those operators who provide us with clean and safe drinking water, the Department of Environment and Climate Change created the Operator of the Year award. The awards process includes two categories; Operator of the Year and Volunteer Operator of the Year.

Recipients of the 2016 awards were:
- Operator of the Year – Dale Walsh (Town of Bay de Verde); and
- Volunteer Operator of the Year – Harold Legge (No'kmaq Village - Flat Bay Band Inc.).

Deserving operators will have demonstrated ingenuity, proficiency, dedication and professionalism in water system operation. This operator must be certified or working towards certification; participates in education and training opportunities; and show leadership, support to other workers, and goes the extra mile for his/her community.

Does your community have an operator who is deserving of this award? If so, please complete the enclosed nomination form and ensure you include as much additional information as possible. Your recommendation will be very important during the selection process.

Please return your nomination by fax (709-729-0320), email (dspracklin@gov.nl.ca) or mail to:
Department of Environment and Climate Change
P.O Box 8700
St. John’s NL A1B 4J6
Attention: Deneen Spracklin

The chosen recipients will receive an award which will be presented at the 2017 Clean and Safe Drinking Water Workshop (March 28 to 30, 2017). Award selection will be made by the Community Water and Wastewater Section.

Nominations must be received no later than 4:30 pm on February 28, 2017

Newfoundland
Labrador

Department of Environment and Climate Change
Water Resources Management Division
2017 Operator of the Year Award
Nomination Form

Recognizing an operator who has demonstrated professionalism and dedication in providing clean and safe drinking water

Award Category: Volunteer ________ Paid ________

Operator’s Name: _____________________________________________

Community: _________________________________________________

Years of Service: ___________________________________________

Submitted by: _______________________________________________

Why does your Operator deserve to be the 2017 Operator of the Year?

________________________________________________________________________

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(Add additional pages if necessary)