

2023 Volume 3. Issue 15

Happy New Year!!!



Field Notes

Recap of 2022 Environmental Public Health Week Sept. 26-Oct. 2, 2022 "Strength through Collaboration"

This edition will highlight the work of Environmental Health Officers/Public Health Inspectors and other Public Health Professionals



Dr. Janice Fitzgerald, Chief Medical Officer (left) was the recent recipient of the Nathan Gosse Memorial Award on behalf of the CIPHI NL branch. Presented by Tammy McDonald CIPHI NL branch (right).

INSIDE THIS ISSUE

- Food Safety of boxed lunches.....2
- Wastewater Surveillance in Newfoundland and Labrador.
 5
- Advanced Sewage Treatment for Homeowners ..10
- Managing Legionella Risks: Exposure, outbreaks and updates on preventive policy for building water systems



Food Safety in Bagged Lunches

By: Tammy McDonald

From experience, parents will often ponder and scramble on what meals will be on tonights' dinner menu. While school lunches are no exception, parents still struggle with what to pack for those picky eaters. Parents make a concerted effort to ensure that children try and maintain a well balanced diet but also consciously avoiding foods that are potential allergens for other school mates. The list of allergens will change from year to year but peanuts, nuts, seafood/shellfish, kiwi, and eggs appear to be on most list. Schools will advise parents on particulars during the beginning of the school year.

While this article is not going to focus on particular recipes, it will provide some tricks to ensure food safety is maintained while providing some additional quality hacks. Firstly, when looking at Canada's New Food Guide, a meal should be somewhat divided into 3 groups, 1/2 fruits and veggies, 1/4 meat/protein and 1/4 grains/pastas and sugared beverages should be avoided and replaced with water.

To start, veggies and fruits should be washed and cut and kept cool after cutting. The rationale for keeping it cool is for several reasons; preserve quality and to reduce potential bacterial growth that may have come from the outer peel or skin that penetrated the interior during the cutting process. This is particularly true for root vegetables or fruits that grow close to the ground. Bacteria love warm moist environments to grow and multiply therefore manipulating the environment (time and temperature) will assist with reducing bacteria growth. Hack 1: Manipulating the environment can also reduce the oxidation process of certain foods by adding a natural preservative such as lemon juice (ascorbic acid) or saltwater solution. This is especially true on freshly cut apple slices to prevent early rotting. Hack 2: Adding honey as a sealing agent can also achieve this outcome for certain fruits. Hack 3: Adding a clean and sanitized elastic band around pre-cut fruit with the addition to temperature control will achieve desired outcome.

Next, there are proteins, usually a form of meat or cold cuts, that should be considered. Proteins come usually in a raw state and are cooked to destroy microorganisms and they can be cooled in refrigerator for later use or they come in a cured fashion that can be either sandwich meat (refrigerated) or a jerky style meat (sometimes unrefrigerated). It is mindful to read ingredients and or instructions for product safety. Essentially, these meats should either stay warm or stay cold but should never be left out at room temperature for more than 2 hours. To assist with this, insulated jars offer much protection to keep food cold or warm for extended periods. Also, chilling containers and adding ice pack(s) can also keep foods cool and out of the danger zone (room temperature). Hack: try chilling the container and adding an ice pack for prolongued cooling effect.

Grains are a little easier to pack when it comes breads, they are shelf stable however cooked grains, such as rice, need temperature controls. Cooked rice requires to be kept at hot holding temperatures at 60°C or cooled properly (60°C-40°C degrees in 2 hours, and 40°C-4°C) within an additional 2 hours but not to exceed 4 hours at room temperature in total from time of preparation. Dry crackers, breads and other dehydrated/stable grains add the fulfillment to the above. Pack safe folks!!!!

Context to Food Inspection: Critical and Non-Critical Hazards

Fiscal Year	# Critical Hazards	# Non-Critical Hazards
2014-15	1542	4688
2015-16	1178	3504
2016-17	1170	3169
2017-18	1060	3648
2018-19	987	2669
2019-20	767	2251
2020-21	415	1116
2021-2022	455	1480

While these numbers have remained on the decline since inception of Basics in Food Safety Training there will be ebbs and flows throughout the required Certified Food Safety Training. While recently required in 2021, there are still some facilities that only have a basic concept of food safety. While the pandemic has turned much of the world upside sown, it is time to be back in business with regular food audits of food establishments. Check out a list of Approved Food Safety Course found here: Food Safety Training - Health and Community Services (gov.nl.ca)

These incredible Environmental Health Officers are found at your local Government Service Centre and can assist with food establishment inspections and keeping Newfoundland and Labradorians safe.



Celebrating Environmental Health Week with EHOS in Corner Brook

Snowball Recipe

While no one recommends eating snow, with the exception of Newfoundland's traditional snowball made with scrumptious chocolate, oats and coconut. You will need:

3 cups sugar
3/4 cup melted butter
1 1/4 cups milk
3 cups large rolled oats (quick oats)
1 cup unsweetened fine coconut
12 tbsp cocoa
1 1/2 cups extra coconut extra coconut to roll the balls

In a large pot, on medium-high heat, boil butter, milk and sugar. For approximately 6-8 minutes. Set aside and combine oats, 1 cup of coconut and cocoa. Place in a bowl at room temperature then chill for 3 hours or until mixture can form 1/2 inch balls. Once balls are formed, roll in the additional coconut. Place snowballs in refrigerator to keep their form as they tend to get too soft at room temp. They can be stored in freezer until ready to eat. For extra fun, you can form balls using a marshmallow filler inside.

Pairs well with coffee, tea, and hot chocolate and I bet you cannot eat just one!!!!!!



Merry Christmas

And

Happy New Year

from

Field Notes Volunteers and Ciphi NL

WASTEWATER SURVEILLANCE IN NEWFOUNDLAND AND LABRA-

By: Douglas Howse

Wastewater testing has been used for modern disease surveillance since the 1940s, when samples were cultured to detect the presence of polio. With recent advances in genetic sequencing and analysis, wastewater surveillance has gained renewed interest as a relatively low-cost, non-invasive means to detect and manage infectious diseases as well as illicit drug use.

Since the beginning of the COVID-19 pandemic, wastewater has been tested for the presence of SARS-CoV-2 RNA in many locations worldwide, as a supplement to clinical testing, to support Public Health decision making. Wastewater testing is highly sensitive and can detect the presence of viral RNA even in the waste of asymptomatic individuals and individuals who have negative clinical test results.

In November 2020, the Water Resources Management Division of the Department of Environment and Climate Change (ECC), and the City of St. John's made a proposal to the Department of Health and Community Services (HCS) to begin testing wastewater from the Riverhead wastewater treatment plant. HCS approved the plan in February 2021, when there were known cases in the St. John's area, in order to test the methodology.

1/2 page advertisement availale

(continued on page 6)



Wastewater Surveillance in Newfoundland and Labrador

The first wastewater samples collected in St. John's were tested through Eurofins, a private accredited laboratory that had been contracted to provide chemical analyses of NL municipal drinking water. Knowing that wastewater surveillance would likely expand to other communities, and that future program funding was uncertain, testing moved to the National Microbiology Lab (NML) in April 2021. The NML also provided variant sequencing, and assisted with connecting NL to other provinces, territories and research institutions involved in wastewater surveillance.

The wastewater surveillance initiative is led by a committee co-chaired by ECC and HCS, which is an uncommon partnership among other Canadian wastewater efforts, and one that has greatly benefitted its advancement. Other committee representatives include the City of St. John's, Memorial University, Eastern Health, and IBM Canada. The committee meets biweekly to discuss current sampling and testing issues, the latest test results in the context of local epidemiology, information from national networking meetings, data modeling, and plans for program expansion. Since April 2021, ECC worked with municipalities to gradually add 16 more sewershed catchment areas to the sampling schedule, representing approximately 46% of the NL population in total.

At most sites, municipal workers are tasked with sample collection on a weekly basis, either with a composite auto-sampler or with passive COVID-19 Sewer Cages ("COSCa balls") designed by Dalhousie University. The COSCa balls are 3D printed at Memorial University or ECC, and require periodic replacement due to loss or damage during sample collection. Collected samples are either sent to ECC for additional processing and packaging, or sent directly to the NML.

All NML wastewater results are returned to ECC for public reporting on a dedicated website: https://www.gov.nl.ca/ecc/waterres/wastewater-surveillance-for-covid-19-virus/. While the turn-around time for sample results from the NML is generally around seven days, adverse weather and other shipping challenges have resulted in occasions where results were received 14 days after sample collection. Given these challenges, ECC and HCS are exploring options to build local capacity for wastewater testing.

In 2021, NL wastewater surveillance was useful as an "early warning" system for detecting COVID-19. For example, Public Health issued a public advisory for the Town of Deer Lake in November 2021 when the wastewater suddenly showed a strong presence of SARS-CoV-2 RNA. The notification prompted symptomatic residents to seek testing which led to the identification and isolation of previously unknown cases.

Wastewater surveillance was also used as supplementary information to confirm the absence of COVID-19. For example, clinical testing decreased during the summer of 2021, but the wastewater results helped to confirm that there was little COVID-19 activity in NL at that time.

As laboratory sequencing methods were further developed, wastewater surveillance was also used to help confirm the presence and spread of new variants in the province, beginning with the Alpha variant in the summer of 2021, Delta in the fall of 2021, Omicron BA.1 in December 2021 and January 2022, and finally Omicron BA.2 in February and March 2022.

While wastewater results can be widely variable due to increased flow rates or other environmental factors, trend analysis provided by the NML and IBM Canada has been helpful in showing the potential projections of community infection. This analysis may become more reliable as the NL dataset increases, community baselines are established and data normalization methods are further refined.

Prior to widespread immunization, when the NL population was more susceptible to the serious effects of COVID-19, maintaining low case counts through Public Health measures, including quarantine, isolation, and widespread testing, was necessary to maintain health care system capacity. The NL population now has one of the highest rates of COVID-19 immunization in North America. This, in combination with the introduction of the highly infectious Omicron variant in December 2021, led to a shift in the provincial pandemic response from one of isolating and eliminating the disease, to one of controlling and managing its spread while maintaining health care system capacity. On March 14, 2022, all remaining Special Measures Orders measures were lifted, including travel requirements and mask use. In addition, the testing strategy shifted to a more focused use of PCR clinical testing among the most vulnerable, and increased use of rapid testing among the general population.

These changes to the province's clinical testing strategy have made wastewater surveillance even more valuable as a way of maintaining ongoing monitoring of COVID-19 activity at the community level, as most new cases detected through rapid testing are now unknown to the Public Health reporting system. Part of "living with COVID-19" into the future will likely include continued wastewater monitoring and public reporting to support both individual and Public Health decision making.

As noted at the beginning of this article, wastewater surveillance has other potential uses beyond COVID-19. The Government of NL continues to work with the NML and other stakeholders to explore opportunities for using the established wastewater surveillance system for monitoring other pathogens, such as RSV, influenza, norovirus, or Sexually Transmitted and Blood Borne Infections (STBBIs). Future plans may also include an expansion of current sampling efforts to reach other regions and communities, and potentially more frequent sample collection.

Wastewater surveillance holds great potential for Public Health, and Newfoundland and Labrador is at the leading edge of this advancement.

1/4-1 page space available



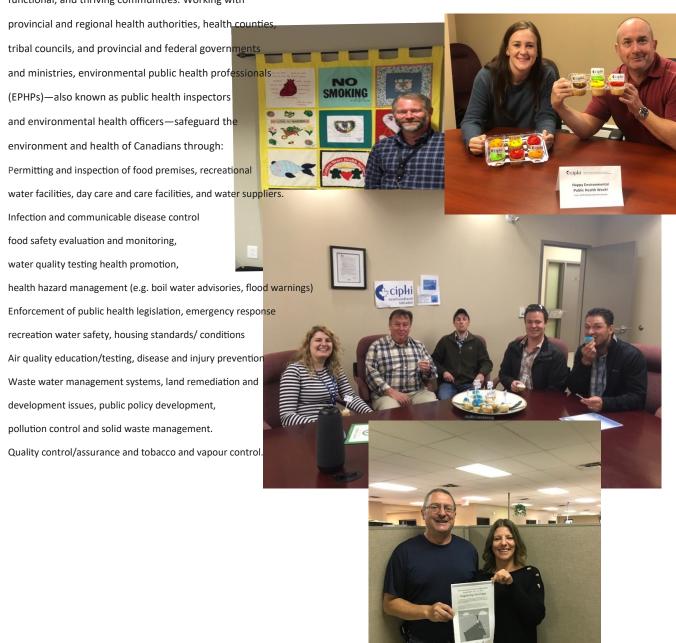
Environmental Public Health Week Sept 26-October 2, 2022

What do environmental public

health professionals do?

Environmental public health is a cornerstone of safe,

functional, and thriving communities. Working with



Advanced Sewage Treatment Systems for Homeowners

By Terry Battcock

The building season is upon us. You may be considering building a new home or, you may have experienced private sewage disposal problems over the last number of months and need to investigate the issue. It may be time for you to consider a solution that is not traditionally sought out. There have been numerous new technologies that are available to small sewage disposal systems over the last number of years, but they have not typically been chosen as a viable alternative to the conventional sewage disposal system. Preferentially it may be time to consider the more environmentally-friendly and potentially less costly option.

To explain why an Advanced Sewage Treatment System may be what you are looking for, let's first examine what most Newfoundlanders who are not on a municipal water and sewer system currently use to service their private residences. The traditional septic tank system consists of a septic tank, a distribution box and a sewage disposal field made up of absorption trenches. The septic tank provides primary treatment by separating the solids from the domestic sewage waste. The lighter solids float to the top and the heavier solids settle to the bottom. This leaves a relatively clarified liquid effluent between the layers. Anaerobic bacterial activity (bacterial activity without the presence of oxygen) partially breaks down or digests the waste in the septic tank. The un-digestible portion remains in the tank and is disposed of when the tank is pumped every two or three years. The liquid effluent from the tank is distributed to the absorption field through a distribution box. The effluent which leaves the tank for secondary treatment in the absorption field is, ideally, free of suspended fats, greases, and other solids. However, it does contain organic materials, bacteria, and viruses. The absorption trenches, through a series of perforated pipes, laid in a bed of crushed stone, filters and distributes the effluent throughout the field by allowing the effluent to slowly trickle from the perforated pipe into the crushed stone and down through the soil. The crushed stone and soil act as biological filters.

1/2 page advertisement space available



Advanced Sewage Treatment Systems for Homeowners

So, conventional septic tank systems perform primary treatment in the septic tank, and secondary treatment in the disposal field. In conventional systems, 30-50 percent of the wastewater treatment is done in the septic tank and 50-70 percent is done in the soil (ref. US EPA, Chapter 4.6.1). The secondary treatment is highly dependent on the good soil and the size of the sewage disposal field itself. This means that approximately 70% of the sewage effluent trickles through soil, and is dependent on the soil (i.e., the environment) to clean it. Comparatively, advanced treatment systems perform approximately 90 percent of the wastewater treatment in pre-treatment tanks and/or advanced treatment units and approximately 10 percent in the soil (ref. US EPA, Chapter 4.6.1).

How does an advanced system work?

Generally speaking, an Advanced Treatment System adds another process or processes to the basic septic tank system. It may utilize aerobic activity to break down organic matter, reduce pathogens and transform nutrients (e.g., ammonia to nitrate). Systems which treat wastewater by adding air are called ATUs or Aerobic Treatment Units. There are other types of advanced treatment systems that utilize filtration methods through materials like peat moss or other media, but these also rely on aerobic activity to treat the effluent. Tertiary treatment is sometimes defined as anything more than primary or secondary treatment; that is more than two treatment processes. Some advanced systems disinfect the treated water chemically (e.g., chlorine) or physically (e.g., UV light), adding another treatment layer, with the aim of producing an effluent that will do as little harm as possible when discharged to the surrounding environment.

The most important thing to remember is that an Advanced Treatment System will remove approximately 90% of contaminants from the effluent before it even hits the disposal field, significantly reducing pollution risk. Besides the decrease in the required amount of soils for secondary and tertiary treatment, an advanced treatment system relies much less on the soil component of treatment than a conventional system. Most of the treatment is done before it ever reaches the environment. That being the case, something more to consider is that the size of the disposal field is often much smaller when an Advanced Treatment System is used rather than a conventional system, reducing overall costs for the customer. Something worth checking out.

https://www.health.gov.nl.ca

http://www.nvca.on.ca



Photo Credit Tammy McDonald. Chris Hart, EHO, actively inspecting a sewage disposal system



National Collaborating Centre for Environmental Health

Centre de collaboration nationale en santé environnementale

Sponsored editorial article

Managing *Legionella* Risks: Exposure, outbreaks and updates on preventive policy for building water systems.

Juliette O'Keeffe, NCCEH
National Collaborating Centre for Environmental Health
tina.chen@bccdc.ca

Legionellosis on the Rise

Reported occurrence of Legionnaires' disease, a severe pneumonia, and Pontiac fever, a milder flu-like illness, caused by Legionella bacteria are on the rise in Canada. Infection occurs via the inhalation or aspiration of affected water droplets into the lungs, with smokers, people over-50 and those with compromised immunity the most at risk of infection. Collectively referred to as legionellosis, the rate of reported cases across Atlantic Canada has remained below the Canadian rate, but the number of reported cases across the country is rising (Table 1). In Newfoundland and Labrador, only two cases were reported between 2011 and 2016, and no outbreaks have been re-



Legionella bacteria. Photo credit: Dr. Microbe via iStock

ported, however outbreaks have been experienced elsewhere in Atlantic Canada with New Brunswick reporting a recent outbreak of 16 cases in 2019 in the city of Moncton.

Canada 251	Total N.L., NB, NS
251	2
	3
484	3
398	5
253	7
328	18
315	7
427	12*
	398 253 328 315

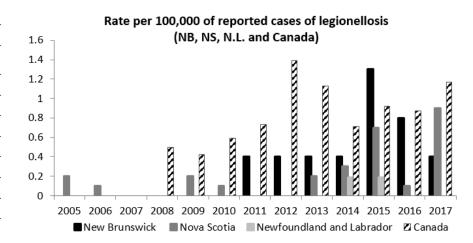


Table 1. Reported cases of legionellosis, and rate per 100,000 in Canada and Atlantic Canada. 2008-2017. Sources: Gov. of Canada, Gov. of Newfoundland & Labrador, Gov. of New Brunswick, Nova Scotia Department of Health and Wellness

11 (continued on page 12)

Managing Legionella Risks: Exposure, outbreaks and updates on preventive policy for building water systems.

There are <u>many factors</u> that may be contributing to the rise in cases observed across Canada including improved diagnosis and reporting practices, aging water infrastructure and an aging population. Prevention is important, with building water systems being the focus of current preventive policy. This article presents a brief overview of sources of exposure associated with outbreaks, new regulations in the City of Vancouver and new resources available from the NCCEH.

Sources of Exposure

Legionellosis is caused by *Legionella* bacteria, an opportunistic premise plumbing pathogen (OPPP) that occurs naturally in the environment but can thrive in some building plumbing systems where the right conditions are present. These conditions include warm water (e.g. 25-45° C), areas of stagnation (e.g. low-use fixtures or plumbing dead-ends), poor disinfection residuals, build-up of biofilm and corroded pipe work where *Legionella* can shelter. Cases are observed more often in summer when there are warmer temperatures, and increased use of air conditioning systems. Sources of exposure can be any fixture that causes water colonized by *Legionella* to become aerosolized as mist or fine water droplets such as hotels/block-nd/4 misters, decorative water features, and cooling towers for large air conditioning systems. This means that *Legionella* exposure can occur in a wide range of premises from residential buildings, to restaurants, hotels, supermarkets, or even temporary events or fairs.

Sporadic Cases Versus Outbreaks

Sporadic cases may be due to small point sources with a small number of users/passers-by but outbreaks occur where the dispersal of aerosols occurs from a localised point source in a crowded area, or where affected aerosols are dispersed over large neighbouring areas. In North Carolina in 2019, an outbreak with 141 confirmed cases, and 4 deaths was traced to a state fair, where many visitors passed by a hot tub display thought to be the source of the outbreak. Temporary events such as these can be significant point sources of exposure but do not represent ongoing exposure beyond the event. Measures can be taken to mitigate risks at these events (see the North Carolina Department of Health and Human Services fact sheet with advice for vendors at temporary events).

In contrast, cooling towers for building air conditioning systems can be running continuously, particularly in the summer months. Cooling towers, often located on top of buildings, use water to disperse heat from buildings through evaporation to the atmosphere. The combination of standing water, warm temperatures and production of mist through evaporation that can be dispersed from a high point of a building creates <u>ideal conditions</u> for the growth and subsequent dispersal of *Legionella*. The majority of <u>outbreak-related deaths</u> have been found to be associated with cooling towers. Past outbreaks associated with cooling towers in Canada have been observed in <u>Toronto in 2005</u> and <u>Quebec City in 2012</u> resulting in 23 and 14 deaths respectively. In the summer of 2018 an outbreak in <u>Surrey B.C.</u> that resulted in over 10 reported cases was traced to a cooling tower in a large shopping mall. In 2019 outbreaks in <u>Moncton New Brunswick</u> and <u>London, Ontario</u> were also traced back to cooling towers. These cases resulted in multiple hospitalizations, but no fatalities.

Getting to the source with cooling tower registries

Investigation of legionellosis outbreaks can be hampered when investigators do not have a quick way to identify the source of the outbreak. In a large city with multiple buildings and hundreds of potential cooling towers, identification of the source can be time consuming, potentially delaying control of the outbreak. Previous outbreaks associated with cooling towers in Ham-ilton Ontario and the province of Quebec led to the introduction of mandatory cooling tower registries in those jurisdictions. Continued on page 13)

Managing *Legionella* Risks: Exposure, outbreaks and updates on preventive policy for building water systems.

The use of a cooling tower registry aids an outbreak investigation by saving time identifying potential sources of the outbreak. Where those registries also require preventive maintenance and routine monitoring for *Legionella*, it is easier to identify which systems have a history of colonization by *Legionella* bacteria and could be the source of the outbreak. Jurisdictions that have cooling tower registries also find that, overall, the maintenance of building water systems improves, reducing the number of reported cases. Quebec has experienced a <u>reduced occurrence</u> of *Legionella* in building water systems, and potentially avoided incidences of legionellosis since the introduction of cooling tower registration.

In addition to jurisdictions with cooling tower registries and requirements for building water management to prevent *Legionella*, Crown-owned buildings are subject to the federal standard MD-15161 Control of *Legionella* in Mechanical Systems. This standard requires mandatory maintenance and reporting practices and *Legionella* testing. Some jurisdictions may also adopt the National Building and Plumbing codes of Canada, with provisions for *Legionella* prevention to be built into the design of buildings. This could include measures such as minimum distance between cooling towers and building air intakes

New Regulation in Vancouver

As of January 1st, 2020, the <u>City of Vancouver</u> has taken the proactive measure of introducing a mandatory cooling tower registry. The new by-law requires all premises with new and existing cooling towers and evaporative condensers to have an operating permit. The <u>new regulation</u> also requires monitoring and preventive maintenance that will help to reduce the risk of outbreaks. In addition to cooling towers, the requirement for an operating permit will also extend to all new and existing decorative water features as of July 1, 2020. This includes both indoor and outdoor water fountains and green walls, with exemptions for some residential buildings. Other cities may also follow suit with similar preventive policy. Following the outbreak in Moncton in 2019, officials there are also now <u>calling for introduction of cooling tower registries</u>.

Where to find more Information

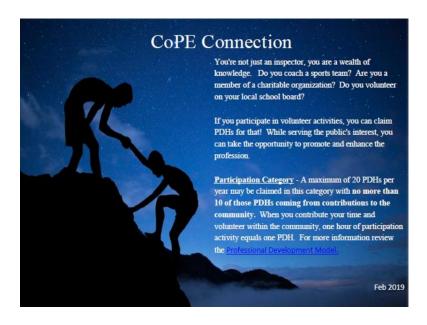
The NCCEH has compiled a new set of resources and peer reviewed articles on *Legionella* specific to our public and environmental health audience. Our *Legionella* topic page includes general resources that can provide a better understanding of *Legionella* as well as resources on managing *Legionella* in building water systems and outbreak investigation and control. On February 20, 2020 our Environmental Health Seminar Series hosted representatives from Fraser Health to discuss the 2018 outbreak in Surrey, and the City of Vancouver to talk about the new by-laws. Recording and slides from the webinar are available on our seminar series webpage, where you can also access recordings and slides from past NCCEH webinars.

For more information, please visit us at www.ncceh.ca or drop us an email at <a href="contextom-con

Continuing Professional Competency

Adapted from the September 2019 CPC article submitted by Karen Hann

Since its launch in 2010, the Continu-Competencies Professional (CPC) program provides the framework needed to provide guidance tools and support to Environmental Public Health Professionals (EPHPs) in becoming qualified and remaining competent and ethical within the pro-The CPC program objectives include meeting standards for maintaining the CPHI(C) credential; support EPHPs in gaining skills knowledge and abilities; encourage EPHPs to be reflective in their practice; create consistency; and improve recognition and credibility as a profession.



More information is available at http://www.ciphi.ca/info-centre/. To ask specific questions about the CPC Program, please email: cope@ciphi.ca or contact Ms. Karen Hann the CIPHI-NL Branch representative on CoPE. Karen can be reached by email at nl@cope.ciphi.ca



Does your insurance provider put you first?

As a CIPHI member, you get great rates on home, car and travel insurance through Johnson.

1.877.742.7490 Johnson.ca/ciphi



Johnson Insurance is a tradename of Johnson Inc. (")I"), a licensed insurance intermediary, and operates as Johnson Insurance Services in British Columbia and Johnson Inc. in Manitoba. Home and car ("DIA") in Quebec and primarily underuritten, and claims handled, by Royal & Scun Alliance Company of Canada ("ESA") in Quebec and primarily underuritten, and claims handled, by Unifund Assurance Company ("UAC") in the rest of Canada. Described coverage and benefits applicable only to policies underuritten by UAC or RSA. Car insurance not available in BC, SK or MB. Home and car insurance not available in BC, SK or MB. Home and car insurance not available in BC, SK or MB. Home and car insurance not available in BC, SK or MB. Home and car insurance not available in BC, SK or MB. Home and car insurance not available in BC, SK or MB. Home and car insurance not available in BC, SK or MB. Home and car insurance not available in BC, SK or MB. Home and car insurance not available in BC, SK or MB. Home and car insurance not available in BC, SK or MB. Home and car insurance not available in BC, SK or MB. Home and car insurance not available in BC, SK or MB. Home and car insurance not available in BC, SK or MB. Home and car insurance not available in BC, SK or MB. Home and car insurance not available in BC, SK or MB. Home and care insurance not available in BC, SK or MB. Home and care insurance not available in BC, SK or MB. Home and care insurance not available in BC, SK or MB. Home and care insurance not available in BC, SK or MB. Home and care insurance not available in BC, SK or MB. Home and care insurance not available in BC, SK or MB. Home and care insurance not available in BC, SK or MB. Home and care insurance not available in BC, SK or MB. Home and care insurance not available in BC, SK or MB. Home and care insurance not available in BC, SK or MB. Home and care insurance not available in BC, SK or MB. Home and care insurance not available in BC, SK or MB. Home and care insurance not available in BC, SK or MB. Home and



CANADIAN INSTITUTE OF PUBLIC HEALTH INSPECTORS

The Canadian Institute of Public Health Inspectors (CIPHI) represents and unites Environmental Public Health professionals across Canada. Its role is to advance the profession and field of Environmental Public Health. The Certificate in Public Health Inspection, or CPHI(C), is granted by the Canadian Institute of Public Health Inspectors and is recognized throughout Canada by boards of health and other local, provincial and federal agencies.



Canadian Institute of Public Health Inspectors Newfoundland & Labrador Branch

Website: www.ciphi.nl.ca

E-mail: nlpresident@ciphi.ca

Twitter: @CIPHI_NL

Contributing to Field Notes:

All CIPHI NL Branch members may submit articles and photos to be included in future issues.

Email: ciphinlbranch@gmail.com

Field Notes Publication Group

Editor: Tammy McDonald
Associate Editor: Terry Battcock
Associate Editor: Chris Nolan
Columnist Douglas Howse
NL President: Jillian Young
To contact the publication group,
email ciphinlbranch@gmail.com



Photo Credit: Tammy McDonald Daven Grikis, EHO, inspecting a public pool