

# Water Talk

WELL DRILLERS – WELL DIGGERS – PUMP INSTALLERS – MANUFACTURERS & SUPPLIERS - TECHNICAL

Fall 2018

## Who We Are

NSGWA is an Industry Association of five divisions: Well Driller's, Well Digger's, Pump Installers, Manufacturers and Suppliers and Technical. The Board of Director's consists of five volunteers and a Secretary-Treasurer. Our By-Laws, Memorandum of Association and Memorandum of Understanding with NS Environment can be found on our website:

<<http://www.nsgwa.ca>>.

We have a toll-free number (1-888-242-4440) to better serve you! If outside NS call (902) 845-1084.

[www.nsgwa.ca](http://www.nsgwa.ca) 119 Bakers Point Road, East Jeddore, NS B0J 1W0 1-888-242-4440

## Message from the Chair

Well fall is here! Wow, it was like somebody turned a switch on that changed from summer to fall! However, we had a wonderful summer with very few rain days.

For those that work outside; I hope everybody had a busy summer given the dry weather. New construction seemed down in rural areas.

I noticed an increase cost with supplies this year. All contractors need to pass those increases on to the customer and not take it as a loss. Just blame it on Trump.

For those that missed our Annual General Meeting and Awards Dinner; we had a wonderful time at Hatfield Farms. It was great atmosphere and the beef was amazing! A lot of fun for both kids and adults and adults that still behave like kids! If anyone has suggestions for next year Awards Dinner please share your input.

The next NSGWA Fall Meeting is on **November 10<sup>th</sup>** at the Best Western Plus Hotel and Suites, Dartmouth. I hope to see you there

Jordan Rogers  
NSGWA Chair

## 2018 AWWA Windup

Well we can stop wondering if they will come. They came! All enjoyed and learned while attending this years' trade show and convention.

On Thursday, Sept 27<sup>th</sup>, the Meet and Greet went over very well with about 40-50 people in attendance. There was a great atmosphere, with much chatter and renewed friendships. The crowd was entertained with the fine music of local musician Gord Tucker.

Friday was a day of learning. There were 5 seminars and all were very well attended. We are extremely thankful to the presenters for such a great job! Later in the day, the tradeshow opened and Mayor Bill Mills from Truro officially opened the show at 6 p.m. The show remained very busy until 9 p.m. and then the silent auction took place where approximately \$2,000 was raised. The ladies program was also held on this day and all those that attended, enjoyed their day starting with a guest motivational

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## Upcoming Dates

### NSGWA Fall Meeting

Where: **Best Western Plus Hotel and Suites, 15 Spectacle Lake Drive, Dartmouth**

When: **Saturday, November 10, 2018**

Start: **10:00AM**

#### Agenda

1. Opening remarks
2. Review/Approval 2018 Fall Agenda
3. Review/Approval 2018 AGM Minutes
4. Presentation/update
5. New Business
6. Other Business
7. Adjournment

**\*\*Please be advised Agenda is subject to change\*\***

#### Rewrites and exams ...

##### November 10, 2018

Best Western Plus Hotel and Suites, 15 Spectacle Lake Drive, Dartmouth

##### 12 PM start

For more information, please contact the NSGWA office.

\*\*\* Exams are being held twice a year. If you are requiring a course or exam, please contact the NSGWA office to be put on the list as it is a seat basis\*\*\*

#### Ideal Home Show

Where: **Exhibition Park, 200 Prospect Rd, Halifax**

When: **March 29-31, 2019**

This is a great way to help *promote your company* while *promoting the NSGWA*. You get to meet and talk to potential homeowner's and promote your business. This is a "word of mouth industry" so why not?! You also receive CEP points while doing so.

If you would like to "*Man the Booth*" for the NSGWA, please contact Noreene at the NSGWA office for times.



for short videos of Well Drilling, Well Digging and Pump Installation for the 2019 Home Show Demonstration. Please contact the NSGWA office if you have some!!

## 2018 AWWA Windup con't

speaker, then off to the Train Station Inn, Tatamagouche and Jost winery in Malagash .

Saturday morning there were two more seminars and the tradeshow was also open.

The AWWA 2018 event wound up at approximately noon and all were looking forward to another successful show in 2020 and in saying that, people must come forward and get the planning off and running now as time flies, get involved!

To all that were involved in this convention plus the great attendance, **Thank you** all for your support!!

We would like to also thank those who travelled from Ont., Que., N.B, NL, PEI and from the U.S, to be part of this show!

Finally ... a big **Thank you** to the trade magazines, Ground Water Canada and World Wide Drilling Resources for providing such great coverage!

It takes a lot of effort to host such a show and we pulled it off with great reviews!

A huge shout out to the organizing committee.....Jon O'Brien, Wayne MacRae, Danny Constantine, Jordan Rogers, Bill Kyte, Roger Roy and myself; Tom Burke.

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## LABOR RATES PER HOUR

IF YOU WATCH US	\$ 55.00
IF YOU GIVE US ADVICE	\$ 65.00
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IF YOU WORKED ON IT BEFORE	\$105.00

**A little humor to make your day!**

## ***Water Supply Upgrades***

In response to drought conditions and water shortages experienced in 2016, the Province passed Bill 62 in November 2016 to amend the Municipal Government Act and the Halifax Regional Municipality Charter to allow municipalities to create a program that would pay the costs of drilling or expanding wells upfront. These costs would then be applied to a property's tax bill and repaid over a specific period of time. Under these amendments, municipalities that wish to participate would create a by-law that lays out the details of the water supply upgrade program.

Some examples of municipalities who have created by-laws are given below. Note that eligibility and the definition of "water supply upgrade" may vary among the by-laws.

**1. Municipality of the County of Annapolis C3 Water Supply Program (WSP) Bylaw**

<https://annapoliscounty.ca/legislative-services/bylaws1> (click on C3)

**2. Municipality of Argyle Council approved the Well Supply Upgrade Lending Program By-Law #38** in January 2017. Further info can be found at:

<https://www.munargyle.com/en/well-upgrade-lending-program.html>

<https://www.munargyle.com/en/bylaws.html> (open list and find #38)

**3. Municipality of Barrington advertisement re By-law in August 2017**

<https://www.barringtonmunicipality.com/living-in-barrington/news/568-advertisement-water-supply-by-law>  
update September 2018:

<https://www.barringtonmunicipality.com/living-in-barrington/news/624-water-concerns-september-18-update>

**4. Municipality of Chester Water Supply Upgrade Lending Program By-Law #148**

<https://chester.ca/water-sewer/water-supply-upgrade-lending-program>

**5. Halifax By-Law C-1001 Respecting Charges for the Resolution of Inadequate Water Supply**

Adopted by Halifax Regional Council September 11, 2018, effective September 15, 2018.

<https://www.halifax.ca/city-hall/legislation-by-laws/by-law-c-1000>

If you are not sure if there is a By-law in your area, check with municipal and/or local government.



## A New, Real-Time Drought-Monitoring Network for Shallow Aquifers in Nova Scotia

The need for real-time monitoring of shallow aquifers was highlighted during a widespread drought in Nova Scotia in 2016. The drought was particularly severe in southwestern Nova Scotia, where it was the driest summer recorded in 137 years. This area of the province relies heavily on shallow dug wells for private water supplies, and more than 1,000 wells went dry in 2016. During the drought, there was a need to track aquifer levels so that emergency management staff could plan appropriate management responses and the public and media could be kept informed about the drought impacts.

Although Nova Scotia has a provincial groundwater observation well network (<https://www.novascotia.ca/nse/groundwater/groundwaternet.asp>), it could not be used to monitor rapidly changing conditions because it is not a telemetric, real-time system. The cost to convert the existing network to a real-time network using commercially available equipment was high, approximately \$2,500 per site. With a need for real-time monitoring and a small budget, a low-cost 'Internet of Things' water-level meter was developed by DNR geoscientists, and the device was pilot tested in 2017.

The new water-level meters are permanently installed in each well and use an ultrasonic sensor to measure the water level. The sensor is connected to a microchip that transmits daily water-level data via WiFi. The data are graphed in real time and are available immediately for online viewing and download. The system can send a message when the water reaches a critically low level. Each water-level meter costs approximately \$200 to build, and requires an annual operating cost of about \$5 for batteries. The meters have been pilot tested in shallow dug wells in Nova Scotia and have performed well compared to pressure transducers and manual measurements. Example results can be viewed at the web site [www.thingspeak.com/channels/316660](http://www.thingspeak.com/channels/316660).

The pilot monitoring network will be expanded in 2018 to provide greater coverage across the province. The approach relies on community volunteers to install a meter in their well and provide access to their home WiFi network. We are currently seeking well owners from across Nova Scotia to volunteer their wells to be part of the network. Suitable water wells need to meet the following criteria:

1. a dug well (not drilled);
2. the dug well must be made only of concrete well rings or crocks (old style wells made of rocks or a combination of rocks and well rings won't work);

3. a WiFi signal at the well (this can be checked with a smart phone to see if you can google something on your phone while standing at the well).

As a volunteer, the benefit to you is that your well-water level is measured daily and you can check it on the Internet. The benefit to the province is that water-resource managers can track shallow aquifer levels across the province, which is especially valuable during droughts. If you are interested in volunteering and would like further details, please contact John Drage at [John.Drage@novascotia.ca](mailto:John.Drage@novascotia.ca).

John Drage



Top left: Photo of the water-level meter, with a Swiss Army knife for scale. Top right: Photo of the meter installed in a pilot test well in Halibut Bay. Bottom: Checking a pilot test well in Lockeport.

Source: The Geological Record, Volume 5, No. 2, Page 4, Spring 2018. Nova Scotia Department of Natural Resources.

\*\*John Drage of DNR is now tracking some dug well water levels in real time. He plans to install 12 around the province. \*\*

\*\*The interactive map that allows links to the wells can be found at:

<https://nsdnr.maps.arcgis.com/apps/webappviewer/index.html?id=6bf832eb26ac4b1a8d9f757bea61541e>