

**Canadian National Water Efficiency Network (CNWEN)
MEETING NOTES**

**Tuesday November 10, 2015
11:00 am – 2:00 pm
Halton Region of Halton
1075 North Service Road West, Oakville**

Attendees:

Name	Affiliation	Name	Affiliation
Kathy McAlpine Sims	Halton Region	Glen Pleasance	Region of Durham
Julie Anne Lamberts	City of Guelph	Emily Stahl	City of Guelph
Steve Gombos	Region of Waterloo	Johann Manente	Region of Peel
Conference Call	Affiliation	Conference Call	Affiliation
Bill Christiansen	AWE	John Koeller	AWE
Brent Houle	City of Winnipeg	Bill Chihata	York Region
Carol Salisbury	Ontario MOECC	Mathieu Laneiuville	Quebec Min. Municipal Affairs
Aaron Boulton-Chaykowski – City of Calgary		Duncan Ellison, Past Exec. Director, CWWA	

1. Review of June 10, 2015 Meeting Notes – no changes

2. Additions to the Agenda: no additions

3. National Initiatives: Duncan

a) Flushables Update

Recent meeting in London, UK was attended by 32 experts from Australia, Austria, Canada, France, Japan, Netherlands, Spain and Turkey (Turkey by teleconference). Representatives from INDA and EDANA (the two trade associations) were also present. Notably also present were representatives of three substrate material manufacturers who are now producing substrate products that closely resemble toilet paper performance in the aspect of disintegration.

The meeting was heavily supported by manufacturer representatives such as Kimberly Clark and P&G who are seeking to protect their global market of \$38 billion. Nevertheless some progress was made and better understandings between the parties were achieved. It is likely that the Working Draft 3 will be distributed by March 31st when new text setting out protocols for Toilet and Drain Line Clearance, Disintegration, Settling and Biodegradation will be ready. The impact of flushable products on septic tank systems was also recognized which favours rapid disintegration.

Recently released Federal Trade Commission in US requested manufacturers to stop using word “flushable” until they can scientifically prove they do disintegrate sufficiently.

The next meeting will take place in France, likely at the end of June/early July.

b) ISO Standard Efficiency Management Update

Meeting co-convened by Singapore of ISO Water Efficiency Management Standard to review draft wording is scheduled to take place on November 17 and 18 in the offices of Cole Engineering in Markham, Ontario. It is likely that the collated comments on the draft Standard will be discussed and concluded on November 17.

(Ms.) Wai Cheng Wong, from Singapore who is the convener of the WG has suggested that November 18th should be devoted to an informal exchange of water conservation/water efficiency practices in the participating countries

(Singapore, USA – Mary Ann Dickinson; Germany – Thomas Zenz; and Canada). Note: Wai Cheng is also the Chair of the IWA Specialty Group on Water Efficiency.

Canada's participants include Duncan, Glen Pleasance, Carol Salisbury and Zillay Nawab. Zillay has had extensive experience in water services around the world and particularly in the Middle East.

Any members of CNWEN who would like to attend this informal meeting on the 18th and perhaps describe particular projects they may have undertaken in their municipality as part of the gathering, are encouraged to attend. Let Duncan (duncan.ellison@videotron.ca) know so he can advise Cole Engineering know about the number of attendees. It is also possible to set up a teleconference call for the morning of the 18th.

Cole Engineering's offices are located at 70 Valleywood Drive, Markham, Ontario.

c) Water Efficiency Private Members Bill update

- Frances Scarpellegia Liberal MP was re-elected
- He may try and re-introduce his Bill
- Action: Duncan will send Kathy a copy of the Bill for distribution with minutes

4. AWE Update – Bill Christiansen

Demand Hardening study

- Released end of July – possible impacts of increase in long-term water efficiency on service areas' ability to adapt to drought – in other words, is there no more room to reduce consumption – can they respond to drought the way they used to when consumption was higher.
- Outcomes: Is demand hardening a problem? It depends on demand services of the area. Need to be dynamic in terms of response.
- Details of AWE Demand Hardening Report: <http://www.allianceforwaterefficiency.org/DHreport.aspx>

Greywater Study

- Project requested by AWE Research Committee.
- Literature review of single-family greywater systems – are they viable and cost effective to incentivize?
- In US there is pressure to incentivize grey water systems.
- AWE members have asked for third party study to examine viability of incentivizing.
- Still requires majority of funding to move project further.
- Pros and cons, is the study needed vs. not needed were discussed.
- Details of AWE Greywater Project: <http://www.allianceforwaterefficiency.org/WERC-Graywater.aspx>

Outdoor Water Use Study

- 2 RFPs being finalized and budget developed – next step is to source funding.
- First RFP is review of existing drought restrictions and what is working, level of savings – more recent results from within last few years.
- 2nd RFP is Landscape Transformation Study – what motivates residents and what are resulting savings.
- Also looking at peak demand reductions using smart controller wi-fi technology.
- Bill commented AWE is also seeing significant interest in rainwater harvesting for toilet flushing in particular. If happens on a large scale, raises question of how to charge for non-metered sewer use.
- AWE Outdoor Research Initiative: <http://www.allianceforwaterefficiency.org/OWSRIrelease.aspx>

5. Water Canada/IESO Round Table on Water/Wastewater& Energy Efficiency – Bill Chihata

- Oct. 15 IESO Save-ON Energy and Water Canada magazine hosted round table discussion on energy efficiency and innovation, new technology, power generation ideas etc. at W/WW plants.
- Bill, who works on energy efficiency as well, attended in response to request for a CNWEN representative.
- Pushing demand response program – to reduce peak demand electricity.

- Attended by MOECC Aziz Emmett, equipment suppliers, Ontario Energy Industry Association, QUEST, OCWA, Canadian Water Quality Association.
- Hosted by Peel at Lakeview plant.
- Peel has installed energy Optimization software called Derceto for pumping station etc. gave 5 to 7% energy savings.

6. Ontario Building Code Conservation Advisory Council Update – Glen Pleasance

- Advisory Council is in latter stages of recommendations for 2017 code to Min. of Municipal affairs.
- Council has been asked to improve efficiency by 15% over 2012 code for water, electricity and natural gas.
- Look at increasing storm water retention at lot level using LID such as strategically re-grading, placement of gardens, use of swales, incentives to move towards permeable and away from impermeable surfaces towards more permeable surfaces. TRCA providing input because of their experience in LID.
- Looking to include WaterSense in the Code because many fixtures claim low water use (such as 4.8 litre toilets) but not all are WaterSense.
- Make new homes rainwater and greywater-ready with rough-ins, looking at hot water re-circulation.
- Mathieu mentioned that Quebec is looking at similar ideas for next Quebec building code.
- Washing machines – Mathieu said 100 of 400 washing machines on the market do not meet Energy Star requirements. Quebec looking at revising 25-year-old Innovation and Energy Efficiency Act update because washing machines can't get captured in building codes.
- Carol suggested the Ontario Ministry of Energy's recent announcement on the Green Energy Act updates could allow Ontario to use the Green Energy Act to add water efficiency standards for washing machines.
- Mathieu stated with the update of the Innovation and Energy Act (loi sur l'innovation et l'efficacité énergétique), Québec plans to adopt CSA C360-13 for clothes washers. By adopting this standard, 110 of 468 Canadian clothes washer models would not conform (23.5%).
- The Energy Star Integrated Water Factor (IWF) is around 4. For CSA C360 it goes from an IWF of 4.7 for front-load clothes washer (around 33% of market) to an IWF of 8.4 for top-load clothes washer (around 66% of market). In US, it seems the Department of Energy (DOE) will go to 4.7 (front load) and 6.5 (top load) in 2018.

Mathieu provided the following links :

- Free CSA C360-13 standard available in English (need to register to have access to the energy efficiency portal) : <https://community.csagroup.org/login.jspa?referer=%252Findex.jspa>
- List of products conform to Federal Regulation : <http://oe.nrcan.gc.ca/pml-lmp/index.cfm?action=app.search-recherche&appliance=CLOTHESWASHERS>
- Energy Star explanation of IWF https://www.energystar.gov/index.cfm?c=clotheswash.pr_crit_clothes_washers
- Quebec Loi sur l'efficacité et l'innovation énergétiques : http://www2.publicationsduquebec.gouv.qc.ca/dynamicSearch/telecharge.php?type=2&file=/E_1_3/E1_3.html
- Quebec regulation : http://www2.publicationsduquebec.gouv.qc.ca/dynamicSearch/telecharge.php?type=3&file=/E_1_2/E1_2R1.htm

7. CWWA Conference – Steve and Aaron

- 400 attendees, good turnout, first combined conference, broad spectrum of streams, lots on wastewater.
- Opening plenary was good – Mary Ann participated and had several presentations and panel discussions which gave good exposure to AWE.
- Water Efficiency sessions were well attended – conference allowed for attendees who would not otherwise have heard any water efficiency presentations
- CWWA will keep with this format and 2016 Conference will be in Toronto.

Opportunities for Collaboration between CWWA Water & Energy Efficiency Committee (WE²C) and CNWEN:

- Aaron B-C of Calgary and Jennifer Bailey Vancouver are new CWWA WE²C co-chairs
- Aaron summarized discussion at CWWA Committee meeting held in Whistler – could the two committees combine to one in order to avoid redundancy particularly on research projects.
- General agreement at CNWEN that it would be great to see and participate in increased activity from CWWA WE²C.
- CNWEN members do not want to lose network component of CNWEN, so goal is to develop means of moving both groups forward, focusing on strengths of each.
- Kathy clarified that CNWEN no longer leads joint research projects – either being led by AWE, or jointly by specific municipalities (eg: Peel & York's WSIP program; Waterloo & Guelph's Water Softener projects).
- Was suggested that CWWA's strengths are research, the conference, and advocating for water efficiency at National level as the National voice for water efficiency. The right body for policy comment - for example if Frances Scarpeleggia's Water Efficiency bill comes forward.
- It was suggested that the advantages of CNWEN that the members do not want to lose include:
 - Informal information sharing network for municipal water efficiency professionals – has come full circle back to its original format which existed prior to operating under the CWWA umbrella.
 - Meetings in-person for those able to do so.
 - Focus is just on municipal water efficiency.

What might things look like going forward?

- It was suggested that perhaps CNWEN could become an ad-hoc committee of CWWA WE²C, operating in the same format and makeup it currently holds, share agendas, meeting notes, etc. with CWWA.
- CNWEN meetings continue to focus on municipal WE info sharing; CWWA meetings continue to focus on WE policy, research, conference planning, and include energy efficiency.
- Meeting frequency – commencing 2016, CNWEN now meeting just 4 times per year (instead of 6). This would help avoid problem of too many meetings if many of CNWEN members also participate on CWWA. How often does CWWA WE²C plan to meet?
- Not all CNWEN members are CWWA members (this was one of the challenges with remaining under CWWA umbrella) – don't want to lose CNWEN members, and want to remain municipal member focused.
- CWWA WE²C could be the AWE Canadian Chapter.
- Research undertaken jointly between CWWA and AWE where it makes sense to avoid redundancy.
- AWE and CWWA could lead and jointly manage the administrative functions of research projects where it makes sense to do so, and CNWEN and CWWA members could participate through these joint initiatives.

Action: Aaron, Jennifer and Kathy (and Mary Ann?) to have further discussion prior to CWWA WE²C meeting. Next CWWA meeting is in November – this will be on the agenda

8. Tracking Fire Department Non-Revenue Water – Julie Anne

- Guelph does AWWA IWA Water balance which provides default estimate of 1.25% of production for non-revenue water, which includes unbilled unmetered use.
- Guelph meters many non-revenue water use activities and estimated they were closer to about 1% of total production.
- Water used for fire-fighting and training falls into unbilled, unmetered water use. This was an areas where Guelph felt they could work on getting more accurate data.
- Looked closer at Fire dept. use because thought their figures were questionable. But found for example: A three hour fire does not mean water was used the whole three hours.

- Water efficiency staff added extra fields to fire dept. data base which can be filled in as fire staff fill in other data. Asked them to send print screen of database when they use a hydrant to get more immediate info and asked for monthly report on fire training and monthly report on fire fighting use.
- Data provided by fire dept. used to be very inconsistent – sometimes just annual fire-fighting use, sometimes annual training use. Now hopefully more consistent and therefore more accurate.
- Fire Dept. suggests that 75% of their water use is for training.
- Key to receiving water use and hydrant use data is informing fire dept. why this is important: to ensure hydrants are maintained – we should know which hydrants are used so we can immediately go out and perform maintenance – drain hydrant etc.; and water use data is used to determine whether or not it will be cost effective to implement water management techniques to reduce the volume of water loss.

9. Waterloo's Water Efficiency Water Softening Without Softening Update - Steve

- Nucleated Assisted Crystallization uses polymer beads to crystallize calcium and magnesium, keeping it in suspension so it doesn't gum up fixtures and appliances.
- Market findings: German technology from 20 years ago, widely used in Europe, certified for use here by Institute for Gas and Water, passed NSF health and safety standards
- 7 known manufacturers in North America
- Performance study results: Dr. Peter Fox did chemical analysis on water in Regional Lab.
- Steve wanted to evaluate how long will these systems last in Waterloo's hard water.
- 22,700 litres of water /day run through the units (38 days of avg. household consumption)
- Measured mineral content, metal scan, TDS, ran test twice through – 40 and 44 days each.
- Crystallization (binding of calcium and magnesium) continues after the water goes through the unit.
- Results will be posted on watersoftener.ca website,
- **Steve's CWWA presentation and Dr. Fox's report circulated with meeting notes.**

10. Other Business:

Carol discussed Ontario's proposal to amend the Green Energy Act: Bill 135 introduced on October 28, 2015 to make changes to the Green Energy Act has reached second reading. The Bill, if passed, would enable the Province to develop subsequent regulations to:

- a) implement water efficiency standards for energy consuming products and appliances e.g., clothes washers and dishwashers, and
- b) require annual energy and water reporting and benchmarking for large buildings (over 50,000² ft.). There are approximately 20,000 buildings in Ontario over 50,000² ft.

The initiative is modeled after various U.S. reporting and benchmarking, collecting info using Portfolio Manager. Building owners report energy and water consumption and they can compare their performance against their building over time and to other similar buildings. The intent is to support energy and water conservation decision-making, create useful benchmarks based on building size and category, and drive competition among building owners and allow renters to select buildings with higher water and energy efficiency ratings.

The plan is to require reporting starting with the largest group of buildings in early 2017, phasing in the requirement for smaller buildings to begin reporting in subsequent years. The Ministry of Energy intends to post its policy proposal for the large building energy and water reporting and benchmarking initiative on the Environmental Registry and Regulatory Registry in late Fall 2015 for public consultation.

Carol is asking municipalities for estimates of Institutional consumption in relation to total consumption.

Glen said Whirlpool and Kohler are working with Purdue to retrofit a house built in the 20's with state-of the art water upgrades and will evaluate pre and post consumption data.

Link: <http://www.purdue.edu/newsroom/releases/2014/Q2/whirlpool-corporation,-purdue-turning-house-into-net-zero-home.html>

11. 2016 Proposed Meeting Dates:

- Tues. February 23rd
- Tues. May 31st
- Tues. September 13th
- Tues. November 29th