



Keewaytinook Centre of Excellence - 209-100 Casimir Avenue, Dryden, ON P8N 3L4

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KCE Monthly Newsletter

March 2013

AWWAO Conference

KCE will be delivering training for the AWWAO conference again this year after the March Break - this time in Sault Ste. Marie. Over 50 participants will attend the conference. The Director approved courses that our Centre will deliver are: (1) Backflow Prevention and Cross Connection Control and (2) Developing an Emergency Response Plan for Water Plants.



KCE is pleased to offer a workshop with a focus on Microsoft Office. The 3-day session will deal with: file management, Word, Excel, Publisher and PowerPoint. The course will take place on **March 5, 6, and 7** at the Centre. This workshop will help you better manage your work. Learn how to handle e-mail, create slide presentations and spreadsheets, and write newsletters for your department. Call our office for details.



Training at the Keewaytinook Centre of Excellence



The **KCE** monthly newsletter
is also available at
www.watertraining.ca





Water Declaration of the First Nations in Ontario



First Nations in Ontario walk to the future in the footprints of our ancestor. They have a direct relationship with all water - fresh and salt that must be taken care of to ensure that water provides for humans on a daily basis .

Chiefs of Ontario

Why water is a special compound . . .

Water is a commonplace substance and very essential to life. It is a unique substance because it exhibits many properties that are very unusual. Because of the hydrogen bond between the oxygen atom and the two hydrogen atoms, the nature of water helps govern the global ecosystem from carrying nutrients in solution to controlling our global climate. Below are some of water's unique characteristics.

1. Ice is slow to melt and water is slow to boil. Temperatures change slowly when changing form (phases) from liquid to solid to gas.
2. Under normal climatic conditions on earth, water exists simultaneously in all three phases. Can you name any other substance for which this is true?
3. Water is almost a "universal solvent". It carries nutrients and washes out hands and clothes. It is an inert solvent in that it does not react chemically to form new substances with the materials dissolved in the solution.
4. The density of water increases when it is cooled until about 4-degrees C. and then it expands. The water lines break when freezing occurs.
5. When we sweat, it cools our bodies.
6. The surface tension is very high which allows a bead of water to form a "roundish" drip from the faucet and allows water to cling to soil particles.
7. Moist air is lighter (less dense) than dry air of the same temperature and has a tendency to rise.

Source: www.thewaterq.com

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Disinfection means the removal, deactivation or killing of pathogenic microorganisms.

Disinfection

Disinfection is an important step in ensuring that water is safe to drink. Water systems add disinfectants to destroy microorganisms that can cause disease in humans. The surface water treatment rule requires public water systems to disinfect water obtained from surface water supplies or groundwater sources under the influence of surface water.

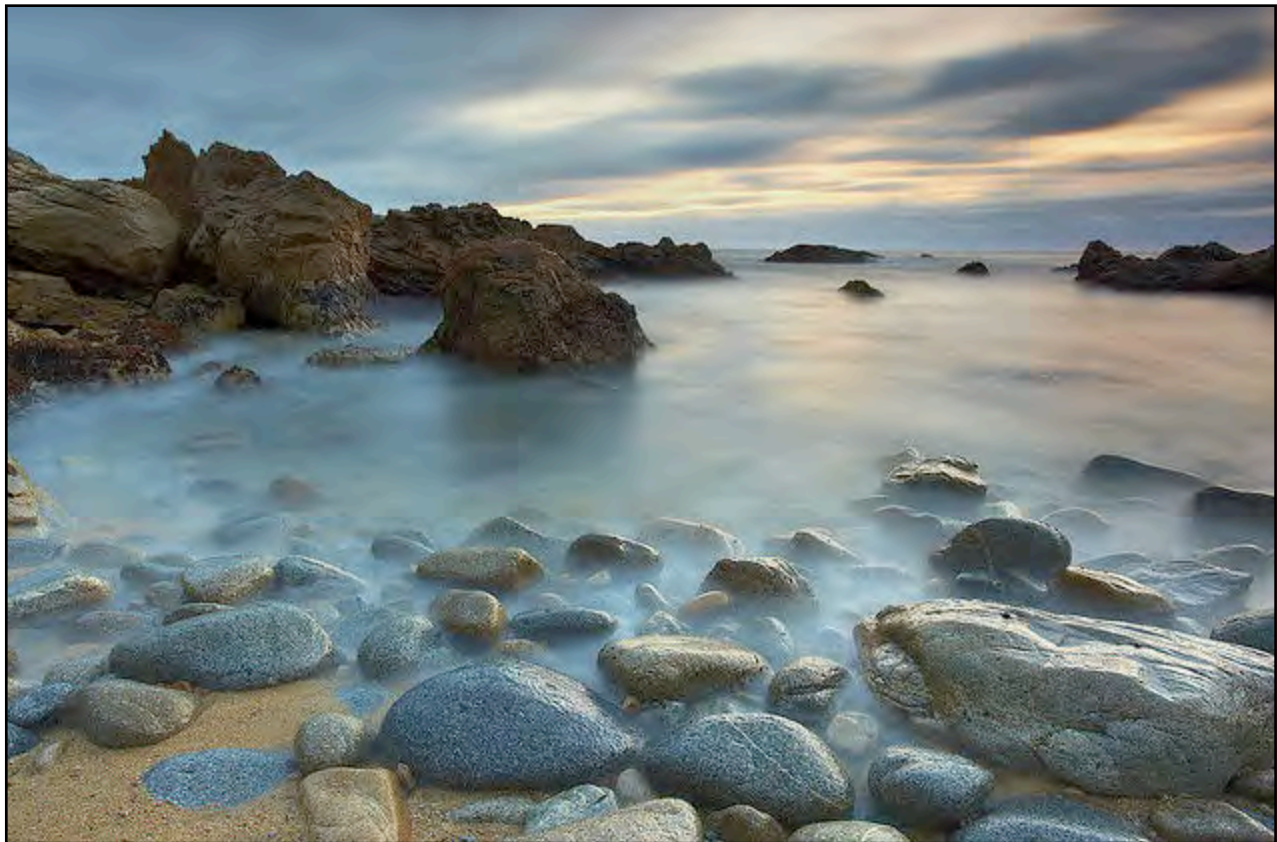
Primary methods of disinfection are chlorination, chloramines, ozone, and ultraviolet light. Other disinfection methods include chlorine dioxide, potassium permanganate, and nanofiltration. Since certain forms of chlorine react with organic material naturally present in many water sources to form harmful chemical by-products, there are proposed maximum levels for these contaminants.

There are two kinds of disinfection: primary disinfection achieves the desired level of microorganism kill or inactivation, while secondary disinfection maintains a disinfectant residual in the finished water that prevents the regrowth of microorganisms.



Less than 1% of all water on earth is fresh water that we can use. We use this small amount for drinking, transportation, heating and cooling, industry, etc.

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National Geographic water images

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Deon Peters

Marten Falls First Nation

— Water Plant Operator

Deon works at the water treatment plant in Marten Falls FN (also known as Ogoki Post). Marten Falls is located approximately 400 km north of Geraldton. There are two operators that oversee the filtration system at the plant. Duties include: daily water sampling, colilert once a week, distribution sampling twice a week in different areas.

Deon received his Class 2 in WT and is also a wastewater operator. He inspects pumps, logs in hours, and inspects lift stations.

Deon enjoys native artwork, painting, fishing, hunting and sports. He enjoys what he is doing and is working to become qualified for the upcoming new treatment plant in Marten Falls.



MARCH

MARCH 4 to 8
OIT-WT/WD I-II

MARCH 5, 6, 7
Easter Computer Literacy with
Microsoft Office

MARCH 8
Site Exam

MARCH 11 to 15
Northern Bands Hockey
Tournament

MARCH 18 to 22
AWWAO conference in Sault
Ste. Marie

MARCH 22
World Water Day

MARCH 29
Good Friday

MARCH 31
Easter Sunday



APRIL

APRIL 1
Easter Monday

APRIL 2, 3, 4
Math for Water and
Wastewater operators

APRIL 8 to 12
OIT off-site training

APRIL 22 to 26
OIT-WT/WD I-II

APRIL 22
Earth Day

APRIL 26
Site Exam



Computer Workshop
Mar 5, 6, 7

Quiz

- Typically, what average percent of total solids in domestic wastewater, both dissolved and suspended, are inorganics?
 - 25 percent
 - 35 percent
 - 45 percent
 - 50 percent
- What group of protozoans do the flagellates comprise?
 - ciliates
 - suctoria
 - mastigophora
 - amoebas
- If a small package treatment plant using the activated sludge process has a light-coloured floating sludge on the surface of the clarifier, which one of the following would most likely eliminate the floating sludge?
 - increase the sludge wasting rate.
 - add a pH stabilizer, as pH is too low.
 - reduce the aeration rates.
 - increase the return sludge rate.

Answers below.



If you would like a hard copy of our monthly newsletter, please send an e-mail to info@watertraining.ca with the subject: KCE.

www.watertraining.ca

ANSWERS: 1.d, 2.c, 3.c