

THE PIPELINE

SWWA

Saskatchewan Water
And Wastewater
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1st Edition

MOBILE WATER TREATMENT FACILITY RISES

Municipal drinking water facilities, power plants, refineries, chemical plants and various other industries all need an uninterrupted supply of high-quality water. Sometimes factors such as a drought, contaminated water, a change in process water quality requirements or the shutdown of a water treatment system for maintenance, affect a plant's ability to meet its purified water needs. When that happens, the plant needs an alternative water supply - fast.

Mobile water treatment offers a quick, cost-effective solution. A phone call to a mobile water treatment provider sets the wheels in motion, and a trailer containing water treatment equipment soon arrives at the customer's site. It's not only emergency situations that call for mobile water treatment, however. Mobile trailers provide purified water for pilot facilities, interim use until a permanent system is installed, system scale-up, zero discharge applications and scheduled maintenance of permanent systems.

With water shortages, more stringent environmental regulations and the cost of capital equipment on the rise, more businesses are choosing mobile water treatment for emergency, seasonal and short-term water treatment needs.

"We've seen a significant increase in the number of requests for emergency mobile treatment and temporary mobile treatment contracts over the past few years," says Pete Sesing, USFilter's vice president for mobile and onsite services.

A recent treatment project involved the Cucamonga Valley Water District in Rancho Cucamonga, California. USFilter provided emergency trailers for nitrate removal from a dormant well that needed to be brought back on line during a water shortage. In late May 2004, the water district learned that its normal supply of water would be interrupted in a week because of emergency supply line work. This shutdown would have caused a 60-percent reduction in the water supply to 43,000 connections. USFilter sent multiple mobile units to the well site in Rancho Cucamonga. Each unit processed 400 gallons per minute of influent well water, removing the nitrate with an NSF-certified resin. The mobile services allowed an uninterrupted supply of treated water for the district, with no waste discharge at the site. Besides bringing the well on line, the mobile treatment provided an additional 10 million gallons of water during the emergency water shortage.



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In the industrial sector, USFilter has provided mobile water treatment to power plants requiring extra water capacity. In June 2004, two emergency mobile trailers were supplied to PSEG Power's Mercer Generating Station in Trenton, New Jersey, preventing a plant shutdown. A sudden increase in water demand, combined with the discovery of colloidal silica in the city water, meant that the plant needed mobile trailers with carbon pre-treatment, reverse osmosis and demineralization.

"We were literally minutes away from being shut down because of the demineralized water demand," says Mark Schwartzkopf, senior environmental engineer, Mercer Generating Station.

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Don Campbell
Branch Manager



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UV Disinfection for Water and Wastewater Workshop

June 2 – Biggar

This full day workshop is scheduled for the day before our annual golf tournament. It will be presented by two scientists from UV Technologies, Calgon Carbon Corporation from Richmond Hill, Ontario. Watch the SWWA website and the next Pipeline for registration information.

UV Disinfection Basics

1. UV Basics

- What is UV light
- How does UV light inactivate microorganisms
- How do we measure the UV light that inactivates microorganisms
- What organisms are susceptible to UV light
- UV sensitivity of pathogens
- UV sensitivity of non-pathogens
- Dose response curves for selected microorganisms

2. Applications of UV Disinfection

3. UV Reactor Design

- Lamps • Lamp sleeves • Ballasts • Cleaning systems • UV intensity sensors • UVT monitors • Temperature sensors • Level sensors • Chambers • Alarms

4. Factors Affecting UV Disinfection

- UV Transmission • Suspended Solids • Hydraulics • Hardness • Temperature • Iron • Water and Wastewater source • Disinfection requirements • Lamp life • Equipment design

UV Disinfection of Wastewater

1. UV Wastewater Reactor Validation

- Why perform or require a bioassay

- Factors affecting the performance of a UV system as measured by a bioassay
- Examples of calculations versus bioassay results
- What is a bioassay?
- How bioassays are performed
- Calibration of a microorganism
- Flow through fluence response curves
- Standardized protocols

2. Sizing a UV System for a Wastewater Treatment Plant

- Factors affecting the performance of a UV system • Bioassay • UVDIS • Pilot testing

3. UV Wastewater Training and Maintenance

- Manuals • UV System Design • Mechanical Checks • Electrical Checks • Control System • Process Checks • System Maintenance

UV Disinfection of Drinking Water

1. Equipment

- Selection of the reactor • Types of reactors • UV dose delivery controls • UV system costs

2. Regulatory Status: Canada and the United States

3. Ultraviolet Disinfection Guidance Manual USEPA

4. Reactor Validation

5. UV Installation Design

6. Case Studies

7. UV Water Training and Maintenance

- Manuals • UV System Design • Mechanical Checks • Electrical Checks • Control System • Process Checks • System Maintenance

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VALVE AND HYDRANT WORKSHOP

Instructed by Don Webb and Dave Maunder

The first portion of this workshop will be held indoors and the topics to be covered are:

- Proper Valve Box Installation
- AWWA Gate Valve Design, Operation and Maintenance
- AWWA Butterfly Valves Design, Operation and Maintenance
- AWWA Fire Hydrant Design, Operation and Maintenance
- How to establish a proper maintenance program

The workshop will move beyond the classroom and into the field in the afternoon to work on hydrants. You will take them apart, discuss the repairs needed and reassemble the hydrants. Each hydrant will be operated upon completion. Please remember to dress accordingly.



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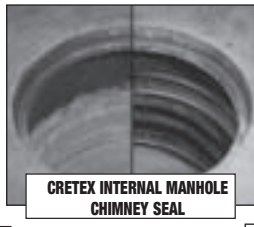
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- > April 24 - 28 Water Treatment & Distribution Class II Saskatoon

Proposed one or Two-Day Workshops

- Jar Testing for Plant Operation
- Water Main Maintenance Course
- Confined Space Entry Course
- Filter Maintenance & Surveillance
- Sewage Collection & Treatment Maintenance
- Water & Wastewater Workers' Safety Course
- Operation & Maintenance Pump Systems

Interested Parties - Please request specific registration forms.

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WORKSHOP REGISTRATION FORM

Valve & Hydrant Maintenance (0.7 CEUs) Class Size Maximum 50, Lunch Included

May 2 - Moosomin
Location:
Communiplex
113 Wright Road East

May 4 - Leader
Location:
Leader Community Center, Club Room
401 - 1st Avenue West

Sign-in time for all workshops – 8:00 - 8:30 a.m.

Bring: Pen and paper. Remember to dress accordingly for the hands on portion of this workshop.

Name: _____

Street Address / Box Number _____

City: _____ Postal Code: _____

Work Phone: _____ Home Phone: _____

Please note that the deadline for workshop registration is two (2) weeks prior to date of workshop. ALL workshop attendees must pre-register and pre-pay for workshop. No walk-up registrations are allowed and no cheques are to be submitted at the workshop.

Workshop Cost :

Member Price: \$50.00 plus \$3.50 GST - \$53.50 _____

Non-Member Price: \$100.00 plus \$7.00 GST - \$107.00 _____

2006 Membership + Member Price: \$90.00 plus \$6.30 GST - \$96.30 _____

Complete the following IF you are purchasing a 2006 Membership AND attending the workshop as a member. If you are not sure of your membership status please contact the SWWA Office at 761-1278.

Work Fax: _____

Employer: _____

Position / Title: _____

Signature: _____

Submit this form and your cheque made payable to:

Saskatchewan Water and Wastewater Association
46 Windfield Road
Regina, Saskatchewan S4V 0E7



SWWA ANNUAL GOLF TOURNAMENT (TEXAS SCRAMBLE)

Limited Space Available

Saturday, June 3rd, 2006 in Biggar, Saskatchewan

Biggar & District Golf Club - 3 km North on Highway #4

Registration: 9:00 a.m. Tee-Off: 10:00 a.m.

~ **COST** ~

\$45.00 per person if registered and paid by May 25, 2006

\$60.00 per person if registered and/or paid after May 25, 2006

NO EXCEPTIONS

Includes 18 holes of golf, steak supper and prizes
Banquet at Biggar and District Golf Club Clubhouse

ACCOMMODATIONS:

Westwinds Motor Hotel - (306) 948-3301

Homestyle Motel - (306) 948-2225

CAMPING:

Regional Park - (306) 948-2532

Plaza Mobile Home Park - (306) 948-2554



Accommodations are limited in Biggar, hotel rooms will be held for SWWA tournament attendees until May 2, so book early. Or consider camping at either of these 2 fine camping facilities.

NOTE: A limited number of carts will be available for rental on a first come first served basis on Saturday morning after 9:00 a.m. Sorry, no reservations will be accepted for carts.

The official registration form will be printed in the upcoming May, 2006 edition of the Pipeline. Please look for it and register at that time.

Invitation to Vendors

In addition to your already very generous donations to our yearly golf tournament we would like to offer you the option of sponsoring a hole for a "Hole in One" prize at our 2006 Golf Tournament to be held in Biggar, Sask. on June 3, 2006

For a fee of \$250.00 you will receive:

- 2 - 4 x 4 foot signs describing the promotion and including your logo as the sponsor.
- Complete insurance policy covering the cost of the prize.
- Tournament official to act as a witness on your hole.
- Your logo included on the registration form to be printed in the May, 2006 Pipeline

Advertise your company at a popular event that attracts water plant personnel from around the province! For details call Shannon @ (306) 721-6925.

* **Note** - To abide by rules governing the issuance of the insurance policy only 2 holes will be offered (#3 and #6). These will be sold on a first come, first served basis, so please call early. There will be limitations on the amount of printing on the signage.

