

Let's Go to the Movies!

Don't get enough water at work? Why not enjoy some of these water- and sewer-related movies when you go home tonight?

For the kids:

Finding Nemo

Little Mermaid

Flushed Away

Teenage Mutant Ninja Turtles

Big Miracle

For the adventurous:

20,000 Leagues Under the Sea

The Poseidon Adventure

Pirates of the Caribbean

The Abyss

The Hunt for Red October

Waterworld

In Darkness

For the romantic:

Titanic

Splash

For the brave:

Open Water

Anaconda

The Perfect Storm

Dark Water

Jaws

Gross-outs!

The Blob (1980 version)

Mimic

Alligator

Lake Placid

C.H.U.D.



Power Up! Choosing the Correct Generator

*By Jan Craig,
Tech Support Rep*

Summer heat can bring severe storms and even hurricanes. Don't get caught in the dark—make sure you have the correct generator on hand.



When choosing a generator, you want to be sure it is large enough to handle all your current—and future—power requirements.

How much juice do I need?

To determine the best generator for your situation, you will need to consider all the loads that will be connected to your generator. First, you will need to determine the starting requirements of all the motor-driven devices. To do this, simply add up the total watts of all lights, appliances and tools that you will want to connect to your generator. This information should appear on the name plate of the equipment.

If you are not able to find the wattage, but have the amperage and voltage, use this simple formula to determine watts: **Amps x Volts = Watts**. Next, you must determine how many kilowatts you require. Every 1,000 watts equals 1 kilowatt. For example, if you total up 30,000 total watts you will need a 30-kilowatt generator.

Don't forget to estimate your future power requirements

Using this information, you should be able to correctly identify the generator you will need. But, don't forget to estimate future power needs. A generator is a large investment, and you don't want to find that you have undersized your generator and need to upgrade in the near future due to poor planning.

Trailer-mounted vs skid-mounted generators

Do you want a trailer-mounted generator that you can move to different areas, or a skid-mounted generator that will stay in one place? When choosing a trailer-mounted generator, you will need to decide before ordering if you want options such as trailer brakes, a special hitch, etc. These add-ons require additional costs up front.

A skid-mounted generator needs site preparation. For instance, you need to install a pad for the generator to sit on. This requires referencing local building codes. If the generator is in or near a residential area, sound issues could be a concern. If your skid-mounted generator requires an automatic transfer switch (which is not a standard generator feature), this will need to be addressed by your electrical contractor. They will be able to make a recommendation, and in most cases provide the correct switch.

If after taking all of the above into consideration, you still are not sure which generator is for you, please contact USA BlueBook's Technical Support department. We will be more than happy to help you size a generator and discuss the available options.

2013 World Water Cup Winners

The 2012 AWWA Pipe Tapping Champions from the Birmingham Water Works Board, representing the Alabama-Mississippi Section of AWWA, recently won the 2013 World Water Cup!

The competition was held in Birmingham, England at the IWEX Conference. Each team had to tap a pipe using three different methods (American, U.K. and Dutch), following all the appropriate rules for each method. Every penalty in the World Water Cup is a 30 second penalty. The winning team is the team with the lowest total time for all three methods.

The AWWA team's time was 9:46.43. The second place team representing the Institute of Water in the U.K. had a time of 12:01.82. Third place was taken by the team representing Koninklijk Nederlands Waternetwerk in The Netherlands with a time of 16:48.50.

USABlueBook is proud to have been a Gold Sponsor of this winning team. Congratulations to the winners!

From left to right: Mark Kirkland, Coach; Barrie Light, World Water Cup Organizer (UK); Todd Stewart, Jerry Storey, and Johnny Bittles.



Jerry Storey and Johnny Bittles doing a tap using the U.K. method



Confined Space? Make Sure to Monitor these Gases

Gas detection is an essential first step in any confined space entry. Owning and maintaining a 4-gas detector should be part of your company's

safety program. OSHA regulation 29CFR 1910.146 mandates

the use of gas detectors in a confined space.

The four gases detected are carbon monoxide, hydrogen sulfide, LEL and oxygen. **Carbon monoxide (CO)** is an odorless, colorless gas found in confined spaces.

Hydrogen sulfide (H₂S), commonly known as sewer gas, can desensitize your sense of smell. Once this happens, you don't know your exposure level and the consequences can be deadly. See chart at right for an explanation of the potential effects of CO and H₂S.

LEL stands for Lower Explosive Limit gases such as methane and pentane. It is important to detect for these gases if you will be using any kind of tool that will cause a spark in the confined space. **Oxygen (O₂)** has a standard reading of 20.9%, and it's critical to know if this changes. Any of the other gases mentioned can change the level of oxygen to an oxygen-deficient condition.

After taking the initial reading when entering a confined space, it's important to keep the gas detector with you in case any of the gas levels change while you are working.

Potential Effects of Carbon Monoxide Exposure

Carbon Monoxide is an odorless, colorless gas that may build up in a confined space. In high concentrations of carbon monoxide, a worker may collapse with little or no warning and thus be unable to aid himself.

ppm	Effects and Symptoms	Time
4,000	Fatal	Less than 1 Hour
2,000 to 2,500	Unconsciousness	30 Minutes
1,000 to 2,000	Slight Palpitation of the Heart	30 Minutes
1,000 to 2,000	Tendency to Stagger	1½ Hours
1,000 to 2,000	Confusion, Headache, Nausea	2 Hours
600	Headache, Discomfort	1 Hour
400	Headache, Discomfort	2 Hours
200	Slight Headache, Discomfort	3 Hours
50	Permissible Exposure Limit	8 Hours

Potential Effects of Hydrogen Sulfide Exposure

Although the foul odor (rotten eggs) of hydrogen sulfide is easily detected at low concentrations, it is an unreliable warning because the gas rapidly desensitizes the sense of smell and leads to a false sense of security. In high concentrations of hydrogen sulfide, a worker may collapse with little or no warning.

ppm	Effects and Symptoms	Time
1,000 or more	Unconsciousness, Death	Minutes
500 to 700	Unconsciousness, Death	½ to 1 Hour
200 to 300	Marked Eye Irritation, Marked Respiratory Irritation	1 Hour
50 to 100	Mild Eye Irritation, Mild Respiratory Irritation	1 Hour
10	Permissible Exposure Level	8 Hours

What's That Word?

A list of words is given below. To solve the puzzles, think of a single word that goes with each group of three words to form a compound word or a short phrase.

Example: if the given words are *hot*, *light* and *check*, the answer would be *spot*. Add the word *spot* to each of the other words to form *hot spot*, *spotlight* and *spot check*.

Answers on page 4

- | | |
|--|--|
| 1. _____
plant
under
treading | 4. _____
control
on the
headed |
| 2. _____
switch
ice cream
fishing | 5. _____
water
what a
toxic |
| 3. _____
sledge
water
time | 6. _____
ultra
sub
the hedgehog |



USABlueBook Technical Training Manager



Dissolved Oxygen: Too Much (or Too Little) of a Good Thing

Whether it's in water treatment, distribution systems or wastewater treatment, dissolved oxygen (DO) levels are very important to your process. Dissolved oxygen is the amount of free O₂ in the water. We measure DO in mg/L: typical numbers range from 0 mg/L to 12 mg/L.

Temperature, pressure, water purity and bacterial activity all affect the level of DO in water. More oxygen can be dissolved in colder water, and more oxygen can be dissolved in water at greater pressure. Decay of organic wastes can consume a lot of DO in your water.

DO in water treatment systems

The typical DO trouble spot in the water treatment process is super-saturation of oxygen in the water. The most common cause of super-saturation is cold water or use of ozone disinfection. Additionally, new membrane systems produce such high purity water that they can also promote super-saturation.

Super-saturation can cause oxygen to come out of the water when the water heats up underground, or when it is used in the homes. This results in too much oxygen in the distribution system, which promotes corrosion (and increased customer complaints). The main way to reduce the effect of too much oxygen in your distribution system is air stripping (aeration) using a mixer in your storage tank, and/or air relief valves.

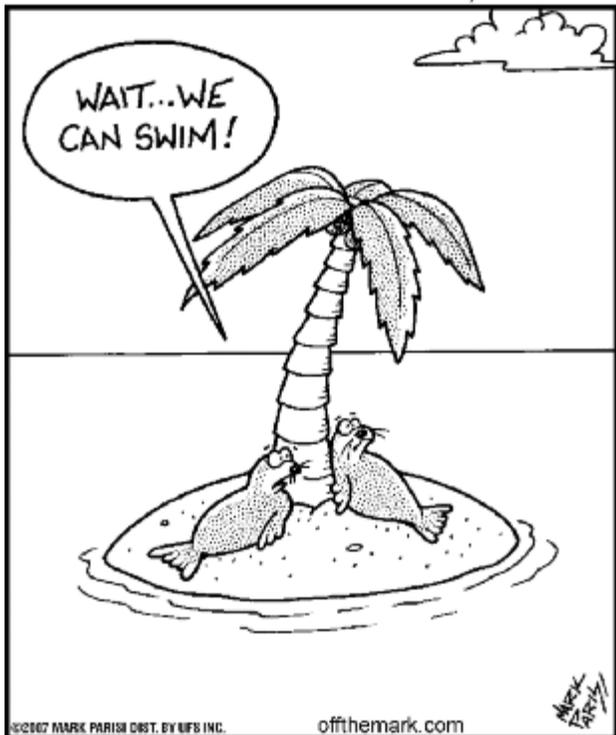
DO in wastewater treatment systems

In the wastewater collection system, the main concern is the lack of oxygen (anaerobic conditions). Besides unpleasant odors, this can also cause corrosion problems and treatment issues at the treatment plant. The simplest way to reduce anaerobic conditions in lift stations is to reduce pumping times and increase pumping frequency. Adding air or chemicals are other options that will reduce odors and improve downstream processes.

The wastewater plant has very special needs when it comes to oxygen levels in the water. The needs are based upon your NPDES permit, and will be covered separately in the next BlueBits issue.

For more information or instruction, please feel free to contact me, Don Van Veldhuizen at dvanveldhuizen@usabluebook.com or 503-544-0456, or LoAnn Mayer at 847-377-5162.

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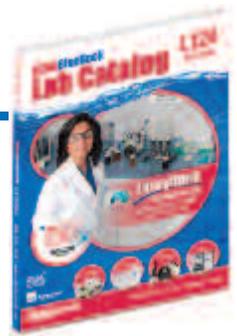
News from **USABlueBook**

Look inside for:

- Choosing a Generator
- Monitoring Confined Space Gases
- Dissolved Oxygen in your Systems

Expanded Lab Catalog L124 Coming in August!

Attention water & wastewater lab professionals: our expanded 352-page Lab Catalog includes lab instruments, chemicals and supplies from our Master Catalog, plus dozens of new items and manufacturer cross-reference charts. Call 800-548-1234 to reserve your FREE copy.



“Boss” Card Winners!

When you receive an order, inside the box you'll find one of the comment cards shown at right. **For every card you return, you'll be entered for a chance to win a \$125 gift certificate from giftcertificates.com!**



Congratulations to recent winners David Franks, Village of Bolivar, Bolivar OH; Steve Kleinsasser, Kingsbury Colony, Valier, MT; and Jody Dunmyle, Bear Creek Watershed Authority, Petrolia, PA. We hope you enjoy your gift certificate!

USABlueBook will be in your neck of the woods soon! Upcoming tradeshow are:

LRWA Annual Conf	Lake Charles, LA	July 8-14	S. CA Water Utilities Expo	Irwindale, CA	Sept 17
KY/TN WPC (AWWA/WEA)	Louisville, KY	July 14-17	California RWA	Paso Robles, CA	Sept 17-19
FRWA	Daytona, FL	Aug 12-14	2013 NYC Watershed/Tifft		
FVOA Conf	Carpentersville, IL	Aug 15	Science & Tech Symposium	West Point, NY	Sept 18-19
OAWU	Seaside, OR	Aug 19-23	Eastern PA Water Pollution	Palmyra, PA	Sept 20
APWA Congress & Expo	Chicago, IL	Aug 25-28	Tri-State Seminar	South Point, NV	Sept 24-26
PMAA's 71st Annual Conf	State College, PA	Aug 25-28	NJ AWWA Fall Meet & Golf	Manalapan, NJ	Sept 27
Kentucky RWA	Lexington, KY	Aug 26-28	H2O/NRWA	Louisville, KY	Oct 1-3
Evergreen RW of WA	Vancouver, WA	Aug 27-29	WEFTEC	Chicago, IL	Oct 5-9
NHRWA	Newbury, NH	Sept 10	NAWC	San Diego, CA	Oct 6-9
Oklahoma RWA	Western Hills, OK	Sept 11-13	CWWA	Barbados	Oct 6-11
PA One Call Safety Show	Monroeville, PA	Sept 12	Westchester Water		
SCRWA	Myrtle Beach, SC	Sept 15-18	Works Conf	Westchester, NY	Oct 7
Arkansas RWA	Hot Springs, AR	Sept 15-19	Atlantic States Rural		
			Water & Wastewater	Farmington, CT	Oct 17



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