Summer 2009

In This Issue
- Air Release Valves
- WVRWA Emergency Response Team Is Called to Action! Top Notch!
- Agriculture Secretary Vilsack Announces Over $600 Million for Rural Water Projects

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# West Virginia Rural Water Association

## Summer 2009

### Articles and Features

<table>
<thead>
<tr>
<th>Page</th>
<th>Article Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>President’s Message</td>
</tr>
<tr>
<td>4</td>
<td>Spotlight on the Berkeley County PSD Potomac River Water Treatment Plant</td>
</tr>
<tr>
<td>7</td>
<td>Air Release Valves</td>
</tr>
<tr>
<td>9</td>
<td>Training Calendar</td>
</tr>
<tr>
<td>11</td>
<td>Preventing and Controlling Blue-Green Algal Blooms</td>
</tr>
<tr>
<td>23</td>
<td>Boil Water Notice</td>
</tr>
<tr>
<td>29</td>
<td>Employee Evaluations Revisited</td>
</tr>
<tr>
<td>31</td>
<td>Dedication of the Meter Reader</td>
</tr>
<tr>
<td>35</td>
<td>Huttonsville PSD Receives USDA Funding for Sewer Project</td>
</tr>
<tr>
<td>38</td>
<td>2009 WV Rural Water Association Annual Snowshoe Conference</td>
</tr>
<tr>
<td>46</td>
<td>WVRWA Emergency Response Team is Called to Action! Top Notch!</td>
</tr>
<tr>
<td>47</td>
<td>Practicing Public Relations</td>
</tr>
<tr>
<td>50</td>
<td>Job Well Done</td>
</tr>
<tr>
<td>52</td>
<td>Put It On Paper</td>
</tr>
<tr>
<td>54</td>
<td>Standard Operating Procedures (SOPs) – Why, What and How?</td>
</tr>
<tr>
<td>56</td>
<td>Agriculture Secretary Vilsack Announces Over $600 Million for Rural Water Projects</td>
</tr>
<tr>
<td>60</td>
<td>Warm Springs PSD Gets a New Plant</td>
</tr>
<tr>
<td>63</td>
<td>Wise Words When Dealing With Employee Reprimands</td>
</tr>
<tr>
<td>65</td>
<td>The Wizard of Ox(idation) – Part 2 of 4</td>
</tr>
<tr>
<td>73</td>
<td>Building a Website – Part 3</td>
</tr>
<tr>
<td>75</td>
<td>Elkins Wastewater Treatment Plant Innovative Approach Doubles WWTP Capacity</td>
</tr>
<tr>
<td>80</td>
<td>Membership Listings</td>
</tr>
</tbody>
</table>

West Virginia Rural Water Association is a non-profit organization of rural and small publicly owned water and wastewater systems. Our goal is to enhance the lives of West Virginians. Our efforts to achieve this goal are focused on providing training and technical assistance to the managers and operators of systems. We work with other non-profit organizations in representing the interests of public water and wastewater systems at both the local and national levels.

WVRWA is affiliated with the National Rural Water Association.
President’s Message

I recently received a newspaper article from John Kabler, one of the Huttonsville PSD water customers, who felt I might enjoy reading it. I found it to be something that was interesting and I felt it was worth sharing with other utilities.

As an association which represents public utilities, we have often discussed the possibility of consolidation; the pros and cons. In this article, it is obvious not only do we need to be concerned about consolidation, but also the real concern of investors looking at water as a way to make money at the expense of our customers is a reality.

This article was in the Wall Street Journal, so some of you may have read it. The article was entitled “Liquid Investment” with information from Planet Water Investing in the World’s Most Valuable Resource authored by Steve Hoffman. He writes, in the United States there are 50,000 water utility companies that operate 160,000 water systems. The utilities pay about a penny per gallon for the water that they take from underground sources, lakes and rivers, which is granted by state agencies and the federal government. Cities and Towns own and operate about 85% of these water utilities with the remaining being owned and operated by private companies. Most of the earth’s surface is water-covered, and yet 97% of the world’s water is in salty seas and is undrinkable. Of the remaining 3%, the vast majority is trapped in ice caps and glaciers.

Today, there are still more than one billion people who live without access to clean water, with the dire consequences of resorting to using contaminated water. This number consists of about two million people; most of them children who die every year from waterborne illnesses.

Mr. Hoffman addresses the issue of water loss from pipes that have long out lived their usefulness, along with water plants that the population has out grown which is a problem many of us are quite familiar with. The point is made about not the selling of water, but the money that could be made investing in equipment needed for treatment, water loss, and the mandates imposed by federal and state regulations.

One example of this is arsenic removal; he states “will be a niche growth market for treatment technologies”, and of course the old argument that private companies can better manage than government entities because they also look at the bottom line. We all agree there is no perfect solution; however systems that can be operated and not have to worry about stockholders dividends which will surely help keep water rates in the range that are affordable.

Anyone who operates a water or wastewater system would agree that the bottom line is important, but to public utilities the bottom line is not only the financial condition but the customers we serve. Public water and wastewater offices are one of the few utilities where a customer can still find someone to talk with and not have to push buttons to do so. Keep your ear to the wind, because this is not the last time we will hear about Planet Water “Investing in the World’s Most Valuable Resource.”
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Spotlight on the Berkeley County
PSD Potomac River Water
Treatment Plant

The new Potomac River Water Treatment Plant lies nestled next to the Potomac River in Northern Berkeley County near Spring Mills. After approximately three years of planning, design and construction, the plant went on line in early January, 2009. The plant provides drinking water for the majority of the Berkeley County PSD northern district.

Executive Director Paul Fisher and Water Production Superintendent Daryl Mason’s pride and joy, is managed and operated on a daily basis by Chief Plant Operator, Steve DeRidder and his staff of five water treatment operators. The plant has a maximum capability of six (6) mgd and averages approximately three (3) million gallons on a daily basis. The plant has the capability of expanding to (12) million gallons. The plant is ultra modern and uses membrane filtration and ultra violet disinfection with free chlorine added to maintain a residual in the distribution system.

The complete process starts by drawing raw water from the Potomac River and then through a rapid mix, where coagulants and other chemicals can be added where water then goes through the flocculation and sedimentation basins. From the sedimentation process, the flow travels through two pre-filters, where any debris is removed. It then travels through four Memcor membrane filters. The turbidity is measured after filtration by laser nephelometers that measure in mNTUs (think, 0.000 NTU on a standard nephelometer). The flow then passes through an ultra violet unit and on to a three hundred thousand gallon chlorine contact tank. Finally, the effluent travels to a 1.5 mg storage tank on site.

The Berkeley County PSD plant is the largest and only membrane filter plant on the Potomac River at this time. The management staff of the Berkeley County PSD is to be commended for being progressive and innovative by constructing this plant for their customer base in Northern Berkeley County. This plant is an example of one way to meet and exceed the expectations of the LT2 rules and regulations.

Also congratulations go out to Berkeley County PSD Water Production Superintendent Darrel Mason, Chief Operator Mike Collis and Chief Operator Steve DeRidder for passing their Class 4 Water exam.

This plant is an example of one way to meet and exceed the expectations of the LT2 rules and regulations.
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www.wvrwa.org
Air Release Valves

Air release valves (ARVs) are one of those things that are typically put in the category of “out of sight, out of mind”. While visiting with general manager Kevin Short of Sun Valley Public Service District (PSD), in the outskirts of Clarksburg, the subject of air release valves (ARVs) came up. He said that their PSD had been having problems with odors around manholes and lift stations and that someone suggested that the problem might have to do with faulty ARVs. Kevin told me that he had replaced the valves and indeed the problem was resolved. He also noted that he was going to stick with the stainless steel material for the valves, as the other materials were only lasting a few months.

I know that, over the years, I have had several systems approach me about odor problems, but I never would have associated them with ARVs. So, I decided to do some research on ARVs and see what I could find. Amazingly, I was not able to find anything directly associated with odors. However, it does make sense that if the air or gases are not released from the force mains, entrapment of these gases could create a perfect environment for the production of anaerobic bacteria that produce gases that create odors. In addition to the odor, dangerous, deadly and destructive gases may be produced. Usually, where hydrogen sulfide (rotten egg smell) is noticeably present, manholes, pipes and metal structures are badly deteriorated.

So, I decided to do some research on ARVs and see what I could find.

There are design standards that suggest the proper placement of ARVs. Typically, they are placed at all the high points in the force mains. Also, it is suggested that they be placed every 2,500 feet.1 This may seem a little much, but water contains about 2 percent air, so a mile of pipe could contain as much as 100 feet of trapped air or other gases. If all of the air accumulated in one place, an air lock could form preventing the pumping of any sewage.2 ARVs act as a release for gases, as well as vacuum release (combination valves) to drain lines when repairs are made.

When ARVs fail they can cause entrapment of gases in the sewer lines and they can cause sewage to bypass, but they can also prevent pumps from pumping (air lock) or even cause energy costs to rise from overworking pumps. ARVs should be checked annually for proper operation. Also, the isolation valves for the ARVs need to be checked and exercised so when it is time to use them they are able to be turned off.

Do you know where your Air Release Valves are?


By Jeff Martin, Wastewater Technician
The aim of the canonical puzzle is to enter a numerical digit from 1 through 9 in each cell starting with various digits given in some cells (the “givens”). Each row, column, and region must contain only one instance of each numerical. Completing the puzzle requires patience and logical ability.

suDOKu PuZZLE

Sudoku provided by www.krazydad.com
Answers can be found on page 30.
## EPA TRAINING CLASSES

<table>
<thead>
<tr>
<th>CLASS</th>
<th>DATE</th>
<th>LOCATION</th>
<th>CEH CREDIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maintaining WQ in the Distribution System</td>
<td>July 22, 2009</td>
<td>Bridgeport</td>
<td>6</td>
</tr>
<tr>
<td>Utility System Safety Practices</td>
<td>August 12, 2009</td>
<td>Lavalette</td>
<td>6</td>
</tr>
<tr>
<td>Flagger Training</td>
<td>August 13, 2009</td>
<td>Lavalette</td>
<td>4</td>
</tr>
<tr>
<td>Mapping Fundamentals</td>
<td>August 19, 2009</td>
<td>Scott Depot</td>
<td>6</td>
</tr>
<tr>
<td>Utility System Safety Practices</td>
<td>August 20, 2009</td>
<td>Oceana</td>
<td>6</td>
</tr>
<tr>
<td>Flagger Training</td>
<td>August 21, 2009</td>
<td>Oceana</td>
<td>4</td>
</tr>
<tr>
<td>Flagger Training</td>
<td>August 25, 2009</td>
<td>Triadelphia</td>
<td>4</td>
</tr>
<tr>
<td>Leak Detection &amp; Line Location</td>
<td>August 26, 2009</td>
<td>Moundsville</td>
<td>6</td>
</tr>
<tr>
<td>Leak Detection &amp; Line Location</td>
<td>August 27, 2009</td>
<td>Mineral Wells</td>
<td>6</td>
</tr>
<tr>
<td>Valve Location &amp; System Design</td>
<td>September 2, 2009</td>
<td>Pt. Pleasant</td>
<td>6</td>
</tr>
<tr>
<td>Valve Location &amp; System Design</td>
<td>September 9, 2009</td>
<td>Moorefield</td>
<td>6</td>
</tr>
<tr>
<td>Maintaining WQ in the Distribution System</td>
<td>September 23, 2009</td>
<td>Princeton</td>
<td>6</td>
</tr>
</tbody>
</table>

## H.E.L.P. TRAINING CLASSES

<table>
<thead>
<tr>
<th>CLASS</th>
<th>DATE</th>
<th>LOCATION</th>
<th>CEH CREDIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regulation Overview</td>
<td>July 7, 2009</td>
<td>Chester</td>
<td>6</td>
</tr>
<tr>
<td>Basic Utility Management</td>
<td>July 8, 2009</td>
<td>Chester</td>
<td>6</td>
</tr>
<tr>
<td>Class II Water Certification—Part 2</td>
<td>July 14-16, 2009</td>
<td>Beckley</td>
<td>—</td>
</tr>
<tr>
<td>Class II Water Certification—Part 1</td>
<td>July 21-22, 2009</td>
<td>Kearneysville</td>
<td>—</td>
</tr>
<tr>
<td>Regulation Overview</td>
<td>July 28, 2009</td>
<td>Peterstown</td>
<td>6</td>
</tr>
<tr>
<td>Basic Utility Management</td>
<td>July 29, 2009</td>
<td>Peterstown</td>
<td>6</td>
</tr>
<tr>
<td>Basic Utility Management</td>
<td>August 18, 2009</td>
<td>Cowen</td>
<td>6</td>
</tr>
<tr>
<td>Regulation Overview</td>
<td>August 19, 2009</td>
<td>Cowen</td>
<td>6</td>
</tr>
<tr>
<td>Basic Utility Management</td>
<td>September 1, 2009</td>
<td>Hedgesville</td>
<td>6</td>
</tr>
<tr>
<td>Intro to Excel</td>
<td>September 2, 2009</td>
<td>Hedgesville</td>
<td>6</td>
</tr>
<tr>
<td>WQ Sampling &amp; Monitoring</td>
<td>September 8, 2009</td>
<td>Buckhannon</td>
<td>6</td>
</tr>
</tbody>
</table>

## WASTEWATER TRAINING CLASSES

<table>
<thead>
<tr>
<th>CLASS</th>
<th>DATE</th>
<th>LOCATION</th>
<th>CEH CREDIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic Math for Operators</td>
<td>September 23, 2009</td>
<td>Petersburg</td>
<td>6</td>
</tr>
<tr>
<td>Basic Math for Operators</td>
<td>September 24, 2009</td>
<td>Berkeley Springs</td>
<td>6</td>
</tr>
</tbody>
</table>
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Thanks for helping the systems of West Virginia
What are algal blooms? Most algae are safe and are a natural part of aquatic ecosystems. However, some algae can produce toxins that can be damaging to humans, domestic animals and livestock that drink or come in contact with the water, as well as to organisms living in the water. Blue-green algae (also known as cyanobacteria) are the only group of algae to be toxic in freshwaters. They are microscopic bacteria living in water and are capable of photosynthesizing which is why they are often called algae. Though microscopic, when they form colonies and accumulate together, they can become visible to the naked eye. Blue-green algae can produce potent liver and neurotoxins as well as skin irritants. However, not all blue-green algae are toxic and even toxic species do not always produce toxins. Many blue-green algal species are able to float and can sometimes be seen as green scums on water, or they just color the water green.

What causes algal blooms? Freshwater algal blooms occur when there is a combination of suitable environmental conditions including nutrients, temperature, light, turbidity, and stable conditions. Nutrients encourage the growth of blue-green algae. The process of nutrient enrichment in a waterway is called eutrophication. The main nutrients contributing to eutrophication are phosphorus and nitrogen. Runoff and erosion from fertilized agricultural areas, erosion from banks, river beds, land clearing (logging) and sewage effluent are the major sources of phosphorus and nitrogen entering water ways. Phosphate attaches to sediments. When water is low in dissolved oxygen, sediments release phosphate into the water. This encourages the growth of algae. Blooms of blue green algae can also occur when the concentration of nutrients is fairly low, but blooms are more frequent when the concentration of nutrients is high. Blue-green algal blooms usually develop during warmer months of the year when the water temperature is higher and there is increased light. Temperatures of 77 degrees are optimal for the growth of blue-green algae. At this temperature, blue-green algae have a competitive advantage over types of algae. Blue-green algae populations are diminished when they are exposed to long periods of high light intensity, but have optimal growth when intermittently exposed to high light intensities. Blue-green algal cells contain gas vesicles that can be inflated or deflated. By using their gas vesicles, blue-green algae are able to regulate their position within the water and, therefore, regulate their exposure to light. Low turbidity allows more light to penetrate the water creating optimal growth conditions for blue-green algae. Blue-green algae prefer stable water conditions with low flows, long retention times, light winds and minimal turbulence.

The presence of blue-green algae may lead to water quality problems in potable water supplies such as taste and odor problems. When algae die, they can clog filters used for water treatment. Some species are capable of producing toxins. An emerging cyanobacterial toxin is Cylindrospermopsin. Cylindrospermopsin has been detected in water bodies worldwide. A major issue with this toxin is when the source water is treated with copper sulfate the cyanobacterial cells break up, releasing large amounts of the toxin into the water. Conventional water treatment has the ability to remove cyanobacterial cells, thus, removing intracellular cyanobacterial toxins through the coagulation process. However, a portion of these toxins are extracellular, and it is this portion that is generally resistant to removal by coagulation, flocculation, sedimentation, and filtration. Copper sulfate is the most widely used algicide in the industry. Toxins produced by blue-green algae can pose a risk to humans. Toxins can damage the liver and neurological system of both humans and animals and in severe cases can cause death.

There are a range of measures that can be used in the prevention and control of blue-green algal blooms. Having a management strategy to manage blooms, land...
and water management, education, awareness, research and knowing what type of algae is in your source water is essential. Algal blooms in lakes or reservoirs can be dealt with by using a number of management strategies. One method is artificial destratification. Artificial destratification involves increasing the circulation of water that circulates between the shallower and deeper layers of the reservoir. This can be achieved by introducing a plume of bubbles near the bottom of the reservoir by installing a propeller or impeller in or near the dam wall. A circulation pattern is set up that reduces the differences in temperature, oxygen and nutrients between the top and the bottom waters. Artificial destratification can reduce algal growth by reducing the sediment phosphorus load available to the water column and so starving the algae of nutrients and by mixing algae deeper into the water column and starving them of light. Another method of controlling algal blooms is to use an algicide such as copper sulfate. Using algicides to control algal blooms is not an effective long term solution to algal problems and should only be used in emergency cases. Risks associated with using copper-based algicides include mass release of toxins from algal cells, accumulation of copper in the sediments, growth of blue-green algae that are resistant to the algicide that may cause greater water quality problems and if you use a copper based algicide test for copper residuals at the treatment plant. Algae can be removed from water through a number of treatment methods including conventional treatment. The most reliable method of algal toxin removal is using activated carbon filtration. This approach uses either powered activated carbon, which can be added intermittently whenever the need arises, or granular activated carbon filters.

In closing: Only a few methods of preventing and controlling algal blooms were discussed in this article. There are other methods available including one using ultrasonic waves. Do your homework to determine what method works best for your water source and type of algae.

---

Do You Remember?

By Mike Dill, Wastewater Trainer

- Milk in glass bottles & delivered to your home.
- Telephones with rotary dials that did not take pictures.
- Voice mail was pencil and paper.
- Rabbit ears, black & white pictures and test patterns.
- Three meals a day did not involve McDonalds.
- Gasoline less than 50¢ a gallon.

- A night out was dinner, movie (with popcorn) for less than $20.00.
- Your biggest concern was what’s happening Saturday night.
- Your wardrobe consisted of sneakers, jeans, and a shirt.
- Jacket with school colors.
- Portable radios that fit your shirt pocket and were AM only.
- Supper was at six and you best be there.
- You could walk without something hurting, twisting or breaking.
- Never mind walk, you could run, really fast and jump.
- Fall down and get up in one motion.
- Ride a bike without helmet, elbow and knee pads.
- Drive a car with a clutch and on the column.
- All the things you used to eat.
- Arriving late was not fashionable.
- Thinking adults had it easy; they just had to go to work.
- Retirement was for old people.
- After graduation, I will . . . and where are you now.

Remember growing old happens, growing up is optional!
WVRWA Welcomes New Employee

Let Me Reintroduce Myself

By Lewis Baker, Source Water Protection Specialist

I have returned to WVRWA after a two year absence. Boy, it is good to be back! As many of you will recall, I used to be the Wellhead Protection Specialist here. I enjoyed providing technical assistance to public water systems which depend on ground water sources. Now I’ll be working to help all public supplies protect their sources of water. Previously WVRWA (and state associations across the country) had a Source Water Protection Program as well as a Wellhead Protection Program, both funded by USEPA. Unfortunately, those programs lost that source of revenue. But now, the US Dept of Ag (USDA) has begun providing for a new Source Water Protection Program in WV. In addition, we hope to regain the USEPA’s support for a second Source Water position in the fall.

As my program is funded by USDA, I’ll be working particularly closely with two agencies within that department: the Farm Service Agency (FSA) and Natural Resources Conservation Service (NRCS), as well as the WV Conservation Agency. In addition, I’ll be using the resources of the USEPA, WVDEP, WVDHHR, local watershed groups, local Source Water Protection Committees, and last but of course not least, our public water supplies.

This job will be largely an effort to bring folks together in a common purpose, to protect our vital sources of drinking water. I hope to see you soon.

Jearl Ramsey Joins WVRWA

My name is Jearl Ramsey and I will be working as your Wastewater Technician #2 for the months of June and July. Beginning the 1st of August, I will begin my employment as an ARRA #2 CR for the Stimulus Program. Through this program, I will be working with Rural Utilities Services and the water & wastewater utilities in the state.

I was employed by the National Rural Water Association for the past twenty-one years as a field representative for the AMP Program. I have traveled to numerous states in the Northeast where I provided technical assistance and training among other tasks. I have thirty-five years of total experience in the water and wastewater profession. I was also an Operator/Manager for both the Towns of Burnsville and Glenville. I live in Stouts Mills, West Virginia and I look forward to working closely with each of you. If you need assistance, I can be contacted at West Virginia Rural Water at 1-800-339-4513 or at 304-439-0736.

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Notes On Energy Savings for the Rural Water Community and Maybe Others

Last month I said we would talk a little bit about electric meters and power bills, but the more I think about it, the more I believe we need to spend this whole issue and perhaps more on this subject. It’s amazing the amount of information about your system, your pumps, and your finances you can derive from these two sources.

- Lets start with electric bills. *(If you take time to read the following, I’d suggest you pull out one of your old bills and follow along.*) These can be very simple or horribly complex, but all that I’ve seen that represent reasonably large loads – say more than 25 kW or about 25 horsepower - have at least two key numbers on them. These are the demand registered that month – look for a number that has the units of kilowatts or kW after it, and the energy use (may be called something else) – look for a number with units of kilowatt-hours or kWh after it.

- OK, so you’ve found these numbers on your bill – what do they mean? Well, demand is just the maximum electric load of devices (usually pumps for us) that are operating at the same time for 15 or 30 minutes during the month. Meter design determines whether it’s 15 or 30. Energy use or kilowatt-hours as the name suggests is just the amount of hours you operate at a demand level. For you math folks, kWh = kW x hours.

- I hope some of you algebra students have already jumped on that little equation and said, “Hey, if I divide the kWh by the kW, I’ll have the hours my pump operated that month.” That’s correct and a good approximation if you only have one pump at that electric metering point and there’s no other significant electric load there. These hours operated aren’t big news if you have an hour meter at that pump, but if you don’t, you now have a new piece of useful info. For example, if you divide the hours operated expressed in minutes into the water production, you’ll have the gpm output for that pump. If this figure varies significantly from the rated output for that pump, you better find out why. Chances are either your pump is going bad or the water meter is off. There’s at least one other possibility (see below) but either of these options obviously needs attention.

- The other possibility from the bullet above is that the demand or kilowatt-hour readings on the bill are wrong. If they are, major effects on your power bill can result and you sure need to run this out. Lots of possible causes for such incorrect figures on the bill – I guarantee you it happens frequently – but if we’re going to save room below for those who read this just for the energy jokes, we’ll have to talk about that next month.

- Joke readers, what’s say we give George Sholin a rest? How about this?………California electrical wind farm says to Governor Schwarzenegger, “We’re big fans of yours.”………………….Go back to Sholin, huh?

John E. Regnier, NRWA
highpnt@mindspring.com or (334) 462-1541
Water Quiz

Remember how important our natural resources are and do your part to conserve them!

1. Which of the following is the main purpose of the coagulation flocculation process?
   a. to remove turbidity
   b. to soften the water
   c. to add oxygen
   d. to disinfect.

2. Which of the following conditions most affect coagulation performance?
   a. velocity, chlorine dosage, detention time, and air temperature
   b. velocity, water temperature, detention time and coagulant dosage
   c. water temperature, detention time, air temperature, and chlorine dosage
   d. detention time, velocity, air temperature, and chlorine dosage

3. Which of the following parameters would be the best indicator that the filter should be backwashed?
   a. filter service hours
   b. head loss
   c. filter effluent turbidity
   d. filter encrustation

4. The most crucial element of effective filter performance is:
   a. water temperature
   b. media density
   c. effective size of the filter media
   d. proper backwashing

5. A filter has dimensions of 100 ft. by 40 ft. is backwashed at 70,000 gpm, what is the backwash rate?
   a. 15 gpm/sq. ft.
   b. 17.5 gpm/sq. ft.
   c. 19.5 gpm/sq. ft.
   d. 21 gpm/sq. ft.

6. What is the chemical formula for calcium hypochlorite?
   a. Cl2
   b. Ca(OCl)2
   c. NaOCl
   d. NaCl

7. A violation of the maximum contaminant level (MCL) for total trihalomethanes occurs when
   a. a single sample exceeds the MCL.
   b. an original sample and an additional check sample both exceed the MCL.
   c. more than 50% of the samples in a given monitoring period exceed the MCL.
   d. the running average of quarterly samples during the previous 12 months exceeds the MCL.

8. CT is defined as
   a. the contact time of disinfectant with water.
   b. the product of residual disinfectant concentration and contact time of the disinfectant with water.
   c. the ratio of the total disinfectant concentration and the residual disinfectant concentration.
   d. none of the above

9. Which of the following waters would have the highest concentration of hypochlorous acid?
   a. pH of 7
   b. pH of 8
   c. pH of 9
   d. pH of 10

10. A gas chlorinator is set to feed chlorine at a rate of 7.5 lbs./day into a daily average flow of 1,500,000 gallons. The chlorine residual is 0.4 mg/L. Find the chlorine demand.
    a. 0.2 mg/L
    b. 0.3 mg/L
    c. 0.5 mg/L
    d. 0.7 mg/L

Answers can be found on page 61
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Water treatment professionals must regard public health protection as the highest priority. Although every water treatment plant operator strives to produce high quality water, if a test result or a condition exists that may threaten public health, a boil water notice (BWN) must be considered.

Therefore, water professionals must develop BWN criteria and action plans before there is a problem, not during a crisis. BWNs require a considerable amount of thought if they are to be carried out in a timely fashion. One of the most important aspects of BWN’s is determining what circumstances will trigger the event, a few examples are:

- A violation of the total coliform rule;
- Loss of disinfection residuals at the point of entry;
- High filter effluent turbidities;
- Loss of pressure in the distribution system;
- Cross-connection/backflow incidents;
- Major water main breaks; or,
- Breaches in the integrity of water storage facilities.

There is no single perfect action plan for all utilities: each must be tailored to the specific system and situation. It is essential that plant staff focus on the challenge of fixing the problem that prompted the BWN thus protecting public health. Text of the public notification regulation can be found in the EPA Public Notification Handbook, on the OEHS website or by contacting your OEHS district office engineer.

Professional judgment and discretion are necessary in making decisions on the issuance of a notice. The water supplier is advised to consult with the local primacy agency to discuss the criteria for issuing public notices or BWNs. These discussions should include the actual wording and conditions for issuing the advisory.

Once the criteria to issue a BWN have been met, prompt action is necessary. Failure to issue a timely BWN could lead to serious public health, financial, and public relations consequences. Customer confidence may be eroded or elevated depending on the timeliness and accuracy of the information they require. BWNs erode public confidence if they are not issued in time or issued too often.

On July 8, 1998, OEHS Environmental Health Procedures Manual Memorandum DW-23 addressed Boil Water Orders at PWSs. Recently, DW-23 was reviewed and revised to improve consistent, proper handling of situations requiring boil water orders. Below is a copy of the new DW-23 and all the appropriate forms that became final December 12, 2008 can be found on the WVRWA Website @www.wvrwa.org under the Operators Tab under downloads.

On July 1, 2002, the West Virginia Bureau for Public Health (WV BPH) adopted the federal public notice rule, which significantly alters the public notification procedures that have historically been used. This rule requires “… notice to the public for violations and other situations with significant potential to have serious adverse effects on human health as a result of short-term exposure …” Many acute violations require a Public Notice (PN) that tells the water consumer to boil water prior to use. Other PNs, however, will suggest that the public purchase bottled water, as boiling will intensify the concentration of some chemical contaminants, such as nitrate.

Under the PN rule, BWNs are considered a type of required PN which must be issued by the water system. This policy will address only BWNs and the related Do Not Use (DNU) water notices. The larger topic of PNs will be covered in a separate, but related policy (DW-37). (Note: It is recognized that many BWNs will be precautionary pending lab results and confirmation.)

The following is a list of acronyms that may be used throughout this document:
UTILITY ISSUED BOIL WATER NOTICES

When is a Boil Water Notice issued?

Utility issued BWNs are issued when conditions have the potential to cause adverse effects on public health. BWNs should be issued by the affected PWS as soon as practical, but no later than 24 hours after the PWS becomes aware of the conditions warranting a BWN. Examples of conditions which may be the basis of the BWN include, but are not limited to, the following:

- Any loss of service to customers.
- A water system’s storage reserve has been depleted to the point customers no longer have service.
- Inadequate chlorine residual in the distribution system and/or at the entry point to the distribution system (less than 0.2 mg/l).
- An unscheduled, major emergency, necessitating system repair and a potential public health threat exists.
- Water pressure is less than 20 psi.
- Cloudy water exists.
- Valid customer complaints about water quality.
- Routine TCR sample found to be total coliform present, with fecal or E. coli present.
- No certified operator.
- Occurrence of a potential or confirmed waterborne illness outbreak.
- Any condition that produces a potential public health threat.

When is a Do Not Use notice issued?

Do Not Use notices should be issued by the affected PWS as soon as practical, but no later than 24 hours after the PWS becomes aware of the conditions warranting a DNU. Consultation with the DO is required as soon as practical, but no later than 24 hours after any PN, in order to determine any additional required actions. Conditions or situations which require issuance of a DNU notice include, but are not limited to, the following:

- Nitrate/nitrite concentrations exceeding the MCL (greater than 10.0 mg/l and 1.0 mg/l, respectively.)
- Any chemical or hydrocarbon contamination of unknown quantity which may pose an immediate public health risk.
- Any credible threat to the water system.

What information must be included in the BWN/DNU?

The form of the BWN/DNU will be similar to the accompanying example. Because the BWN/DNU is a form of PN required under the PN Rule, it must include the following required elements:

1. A description of the violation or situation causing the PN.
2. When the violation or situation occurred.
3. Potential health effects.
5. Whether alternate water supplies should be used.
6. Actions consumers should take.
7. What is being done to correct the violation or situation.
8. When the system expects to return to compliance.
9. Name, phone number and business address for more information.
10. Standard distribution language.

If a PWS has a significant population (more than 10% of any one nationality of the retail customers) that cannot read or understand English, the PWS will also be required to distribute the PN in the understood language of that nationality.

How is the public to be notified?

The PWS shall contact the DO as soon as practical, but no later than 24 hours after deciding to issue a BWN/DNU. Depending on the extent of the BWN/DNU, the public may be notified by a number of methods, including the following:

- Door to door notification of each affected customer.
- Telephone contact with each affected customer.
- Local broadcast media (television and radio).
• Posting of notice in conspicuous locations throughout the affected service area.
• Electronic media notification of customers (e-mail, text messaging, etc.).
• Any other effective means of notifying affected customers.

Who must be notified?
Copies of the BWN/DNU notices will immediately be sent by fax or e-mail to the DO and LHD(s). If the initial notification to the DO is by e-mail, a copy of the notification must also be sent by fax or regular mail service. (Note: Current EPA regulations do not allow official copies of required documents/PNs to be accepted by e-mail. All official documents must be submitted by either facsimile or regular mail.)

In addition to notifying the affected customers, the DO, and the LHD(s), the PWS should consider directly notifying the following entities (as applicable):
• The local Office(s) of Emergency Services.
• The local Board(s) of Education.
• Private schools.
• Child and adult day care centers.
• Colleges or universities.
• Any health care facilities within the affected service area, including: hospitals, medical clinics, dialysis facilities, residential care facilities, dental offices, etc.
• Housing authorities.
• The West Virginia Office of Health Facility Licensure and Certification (304-558-0050)
• Correctional facilities

What actions/conditions are required for lifting the BWN/DNU notice?
Logic dictates that the condition or situation which created the need to issue the BWN/DNU must be remedied or corrected prior to the BWN/DNU being lifted. The DO must be consulted and grant approval prior to public notification that the BWN/DNU has been lifted. There may be certain conditions or circumstances which make consultation with the DO especially critical when lifting a BWN/DNU. In addition to any remedial action that has been taken, water quality samples must be collected and analyzed, with appropriate results reported from the certified laboratory, prior to lifting the BWN/DNU. The type and number of water quality samples are to be determined in consultation with the DO. The following table provides the minimum number of samples to be collected and analyzed prior to the BWN/DNU being lifted for cases not involving an acute TCR violation.

The DO may require additional samples depending on the circumstances necessitating the BWN/DNU.

MINIMUM NUMBER OF SAMPLES TO BE COLLECTED TO LIFT A BWN/DNU

<table>
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When a BWN is issued due to an acute TCR violation and the PWS wishes to lift the BWN during the same month, the system must collect at least five special purpose samples, with absent results. The five special purpose samples may be collected on the same day but at different locations in the distribution system, as long as at least one is from the same location of the previous fecal/E. coli present sample. If at least five special purpose samples are not collected after the problem is identified and corrected, then the system must take at least five routine compliance samples the following month, with absent results, in order to lift the BWN.

Note: It is clearly the responsibility of the PWS to insure all actions needed to lift the BWN/DNU are completed and assure that safe drinking water is offered to the consuming public; however, there may be times or situations in which the water system may request or be offered assistance in collecting the special purpose samples required for lifting a BWN/DNU. Appropriately trained individuals employed by both the LHD (i.e. Sanitarians) and the WV BPH (i.e. Engineers and/or Sanitarians) are considered authorized collectors, but due to the nature of their employment cannot be certified as water operators. All special purpose samples collected by employees of the LHD or WV BPH must be appropriately identified on the sample history form and may not be submitted to the laboratory as “RC” or regulatory check samples. The water system is responsible for all laboratory and other charges associated with the special purpose samples required for lifting the BWN/DNU.

How is the public to be notified that the BWN/DNU has been lifted?
While notifying the public that a BWN/DNU has been issued is extremely important, of equal importance is notifying the consuming public that the water system has returned to normal operations and the water is now safe to use without additional treatment. To this end, the public is to be notified that the BWN/DNU has been lifted in the same manner as it was originally notified of the BWN/DNU. Additionally, the DO, LHD and all other entities that were directly notified that a BWN/DNU was issued shall be directly notified that the BWN/DNU has been lifted.

HEALTH DEPARTMENT ISSUED BOIL WATER NOTICES

The DO or the LHD may issue a BWN/DNU when existing conditions produce the potential for a public health threat and it is known that the PWS has not issued a BWN/DNU or PN. It is especially likely that the LHD may issue a BWN/DNU notice during emergency or disaster situations. Generally, the LHD will consult with the DO regarding the need to issue a BWN/DNU. The PWS will be issued a PN violation for failure to perform the PN.

When the DO or LHD issues a BWN/DNU, every effort will be made to provide as much information as possible; however, due to incomplete information, all ten elements of a PN may not be included. Local broadcast media is the most likely method to be employed by the DO or LHD when notifying the public of both the issuing and lifting of the BWN/DNU. The DO or LHD will also attempt to directly notify the local emergency services and boards of education as well as other local critical customers/entities. Conditions for lifting the BWN/DNU will be the same as if the water system issued the BWN/DNU.

References

DW-18, Guidance for Public Facilities Affected by Boil Water Notices
DW-37, Public Notices

History

Replaces DW-23 dated July 8, 1998

Attachments

10 Required Elements of a Public Notice
Sample Utility Issued Boil Water Notice
Sample Health Department Issued Boil Water Notice
Sample Utility Issued Do Not Use Water Notice
Sample “Do Not Use” Notice for Nitrate
Sample “Do Not Use” Notice for Chemical Spill
Sample BWN/DNU Lifted Notice

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I’ve discussed this topic before in the Mountain State Water Line and the feedback I’ve received from managers and supervisors around the state has led me to once again explore the dreaded deep waters of employee evaluations. Several supervisors have admitted to me that critically evaluating employees is a task that they don’t feel comfortable performing. Rather than something to be dreaded, the task of evaluating employees should be considered as something that’s beneficial for both the employee and the system. However, all too often, many managers are simply scared of making employees mad and are fearful of conflict and confrontation. By failing to fulfill their duties as a supervisor and refusing to conduct an evaluation, a manager is laying to foundations for failure. A less than professional atmosphere will develop in the workplace.

Business relationships cease to be business relationships when accountability is nowhere to be found. Without evaluations and the identification of areas needing improvement, an employee’s professional development is hindered. Staff stagnation will result as there are few incentives for improvement. The regular evaluation of employees is critical in supporting a professional work place. Periodic, constructive feedback permits an employee the opportunity to adjust his or her performance to meet the system's goals and objectives. If merit raises are ever to be given, formal written evaluations are a must.

The acceptance of a supervisory or management position means the acceptance of all of the duties. As a member of a team, no matter how small, to achieve the overall goals of the utility. When considering these issues, the following main areas may be used to evaluate performance:

- Accomplishments
- Technical competence
- Communications- verbal, written
- Organization
- Leadership
- Safety and Housekeeping
- Strengths and Weaknesses
- Developmental Potential

At some point in the evaluation process, your employees should be asked to give an honest assessment of their own performance. By having a voice in their performance review, employees feel valued. If they feel valued, they will eventually start to look at their performance review as a joint effort to help them live up to their potential in your utility.

The regular written evaluation of staff members is essential to the long-term viability of a utility. This process needs to be a part of any progressive professional work environment. It’s the way business should be conducted between supervisors and their employees. If any system supervisor is in need of consultation regarding personnel issues, he or she should feel free to contact me at 1-800-339-4513. WVRWA can also provide you with sample employee evaluation forms should you need them.

The regular evaluation of employees is critical in supporting a professional work place.
Mark Your Calendars to Attend the
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24th Annual Conference
at Snowshoe Resort
September 13-16, 2009

Answers to Soduko Puzzle

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Most of us know who and what makes up a well-operated system. Well-trained and caring operators, tough distribution workers, knowledgeable Board and Council members, and managers to excellent office personnel make up a system. Is that it? No, there are others. And one I’d like to recognize is the sometimes lonely and forgotten meter reader. I know there are a lot of you thinking, “I do more than JUST read meters.” That is true. So, as a manager, operator, or distribution worker that also reads meters, you know how thankless our jobs can be, especially meter reading.

As for your bigger systems that have assigned duties, with meter readers that only do reading and service orders, I hope they get the respect and gratitude that they deserve. Being on schedule is tough enough sometimes, but then, throw in the factors of weather conditions, concerned customers, bending down hundreds of times and walking miles a day, and anyone can get down and out.

For those of you that wear multiple hats, being on a schedule to get readings done before the next billing cycle can be very hard. In particular, when it never seems to fail that you get real busy right before you have to start reading meters. Just think, you have been helping to fix leaks for a week straight and you just finished up a main line break that you couldn’t shut down all the way. So, a 4 hour job turned into a 12 hour job. When you finally get it fixed and back up to normal operation, you realize that you still have to read meters and now, because of the past busy week, you only have a few days to get meters read. So, you buckle down, work through lunch, and get it done, right and on time. Sound familiar? I know this happens a lot.

Hopefully, when meter readers turn in their last readings for the month, they are thanked sincerely. But, if not, hopefully, this article will make some of you think about how dedicated, motivated, and hard-working a meter reader actually is. There are systems I visited that understand how valuable a good meter reader is. If your system has a good meter reader, thank him and make sure he knows he is a part of the team. If you do it all, from supervising to meter reading, pat yourself on the back, stand back, and realize that the job that you think isn’t as important as the others, actually is.

Finally, if your system is lucky enough to have an employee that takes pride in the duty of meter reading, it sure makes a lot of other employees’ jobs easier. I know some systems have radio-read meters, but for the others that don’t, recognize your meter reader because, without them, there could be a lot of headaches.
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Thank You Letters

March 31, 2009
WV Rural Water Association
100 Young Street
Scott Depot, WV  25560

Dear Staff & Matt:  On behalf of the Hamrick PSD Board of Directors and Staff, we would like to extend our thanks to Matt Lamp and the Rural Water Association for your help with leak detection on March 9, 2009. With Matt’s help and expertise, the District was able to find a leak on a ½” service line that was losing approximately 20,000 gallons per day. May not sound like a lot of loss; however, at a system that produces 200 gpm it is. This has improved our pumping time by over 1.5 hours per day.

We appreciate all the assistance that Matt has provided to our District and I enjoyed working with him.

With Sincere Thanks,
Michael G. Helmick
General Manager
Hamrick PSD

April 9, 2009
WVRWA
100 Young Street
Scott Depot, WV  25560

Dear Debbie:

The water department of the City of Logan would like to thank the WVRWA for coming to our aid during a recent emergency situation on our system. We incurred an enormous leak which we could not find. The leak was under several layers of asphalt and concrete in a main line and was going down into the city drains and into the Guyandotte River approximately ½ mile away.

Jack McIntosh and Matt Lamp came over on Sunday and worked tirelessly in locating the leak. We are thankful to have such a good back-up system as the WVRWA on our side. Thank you all so very much.

Sincerely,
Mayor Serafino Nolletti, Chairman
Carol Hale Conley, Manager
Everett Brumfield, Chief Operator

April 13, 2009
Debbie Britt
100 Young Street
Scott Depot, WV  25560

Debbie:

Just a note to let you know what a wonderful job Dave Swain did to prepare the CCR Report for the Town of Carpendale. Many thanks!

Rhonda
Town of Carpendale

May 21, 2009
Ms. Debbie Britt, Executive Director
WV Rural Water Association
100 Young Street
Scott Depot, WV  25560

Dear Ms. Britt:

I am so thrilled to accept the scholarship that has been awarded to me by the West Virginia Rural Water Association. I am enclosing a copy of my fall schedule for Concord University, along with my picture, as requested. I am very excited about starting to college in the fall, and I can assure you that I will do my very best. This scholarship will help me so much and I am very grateful.

Sincerely,
Rebecca A. Morgan
American Flow Control is one of the largest manufacturers of fire hydrants, gate valves, check valves, and tapping sleeves. Whatever waterworks product you require, whatever application you demand, American Flow Control can meet all your needs quickly and efficiently through our nationwide distributor network.

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Huttonsville Public Service District Receives USDA Funding for Sewer Project

USDA-Rural Development celebrated Earth Day 2009 by awarding over $144,000,000 to rural infrastructure projects across the country. Fifty-six communities in 34 states were selected to receive the loans and grants for improvements to water availability and quality. On April 29, USDA officials were on hand at Huttonsville Public Service District’s Earth day festivities to award $1,050,000 in loan funds and $850,000 in grant funds to the Phase II-A sewer system improvements project. Jacqueline Ponti-Lazaruk, the Assistant Administrator for USDA’s Water and Environmental Programs in Washington, DC was the keynote speaker who presented District board members and employees with a check for the funding. Other speakers on hand to help Huttonsville PSD celebrate were Lynn Phillips, representative of Gov. Joe Manchin; Mike Taylor, President of the Randolph County Commission; State Delegate Bill Hartman; State Delegate Mike Ross; and Jennifer Giovanniti, Executive Director of the Randolph County Development Authority. Special guests included WVRWA Board Members Dwight Calhoun and Alan Haught and WVRWA Executive Director Debbie Britt.

The project involves the replacement system in the community of East Dailey in Randolph County, WV. A significant inflow and infiltration problem exists in this and surrounding areas. Existing sewer lines are roughly 70 years old and are mainly made of clay pipe. Approximately 150 customers will benefit from the proposed project. In addition to the USDA funds, the District is applying for funding from the West Virginia Infrastructure and Jobs Development Council to complete the funding package for the $3,100,000 project.

These areas have a great deal of historical significance as they comprise what was once the Tygart Valley Homestead. This was one of the planned communities established in 1933 under FDR’s New Deal programs. The Homestead program was intended to take impoverished laborers, farmers, and coal miners and move them to a modern rural community that would allow them...
to become economically self-sufficient. These homesteads provided employment opportunities, farmland, and modern, affordable housing to families during the Great Depression. West Virginia was home to three of these homestead communities. They were located in Preston County (Arthurdale), Putnam County (Eleanor), and Randolph County (Tygart Valley Homestead). All were initiated between 1932 and 1934. Eleanor Roosevelt was also a strong advocate for the New Deal and threw her support behind it. The Tygart Valley Homestead program drew her attention to the area, where she strove to help provide a new way of life for the area’s residents.

The Huttonsville Public Service District contacted USDA Rural Development along with the West Virginia Infrastructure and Jobs Development Council for financing of the project. Due to the amount of funding needed, the project was broken out into three phases. The Phase I project was completed in 2004 and consisted of upgrading a wastewater treatment facility, line replacement within a portion of the Valley Bend, Dailey, and East Dailey service area, and the extension of sewer service to 40 new customers. Funding for the project included a loan and grant from USDA-Rural Development’s Water and Environmental Programs, a loan and grant from the West Virginia Infrastructure and Jobs Development Council, and a loan from the West Virginia Clean Water State Revolving Fund. The proposed project, known as Phase II-A, will consist of the continuation of line replacement in the East Dailey area, which will consist of approximately 10,000 linear feet of 8-inch gravity sewer pipe, 4,500 linear feet of 6-inch gravity sewer pipe, and 60 sanitary manholes. The project will also involve the replacement of the remainder of the sewer lines in the East Dailey area; construction of new sewer line along Rt. 21 in East Dailey; improvements to the East Dailey lift station; abandonment of the Imhoff tank at East Dailey; Tygart; the upgrade of the Mill Creek lift station; and the upgrade of the Huttonsville lift station.

The District’s Phase II-B project will follow with the replacement of old sewer lines and manholes in the Valley Bend area, a new duplex grinder pump in the Valley Bend area, replacement of the remaining old line and several manholes in the Dailey area, replacement of pumps at the Dailey lift station, replacement of pumps at the Valley Bend lift station, abandonment and removal of the existing Dailey area Imhoff tank, abandonment and removal of the existing Valley Bend area Imhoff tank, and other miscellaneous improvements and upgrades.
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  - Detects Water Main, Service Line, and other water system leaks.
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2009 WV Rural Water Association Annual Snowshoe Conference

What is three months away, is located in the beautiful mountains of West Virginia, and draws a crowd of over 800 attendees? If you answered the WV Rural Water Association annual conference, then you would be correct. We believe that this will be our largest and best conference ever because of our attendees, speakers, and exhibitors. We have paid special attention to providing certified technical training classes addressing current industry issues in response to your requests. These classes are targeted to utility office personnel, town officials, board members, engineers, superintendents and operators.

There are twenty-four (24) technical training sessions that will be offered throughout the four day conference as shown by the conference tentative schedule that follows this note. These courses will provide CEH hours for continuing education for water and wastewater operators. A total of 12.5 hours can be obtained if you attend a session during every timeslot between Monday and Wednesday.

In addition to the classes, there will be approximately 112 companies who will be exhibiting their products and services in the Exhibit Hall that will be located in the EXPO Center. The exhibit hours are Monday evening from 4:30-7:30 pm and again on Tuesday morning from 9:00-12:00 pm. This is an excellent opportunity to visit with the exhibitors, observe their products and services, and thank them for being a large part of the success of the WVRWA Conference.

Do you play golf? On Sunday, 122 golfers will assemble at the Raven Golf Course at Snowshoe to play 18 holes of golf, in a scramble format, and compete in a friendly round of golf with old and new friends. Lunch will be provided as well as awards will be given out at the conclusion of the golf tournament. Register today, as the golf will fill up very fast!

Another big event at the conference is the annual awards banquet which begins with a great meal, award presentations to utility members, and great entertainment. You won’t want to miss this opportunity to visit with old and new friends and relax to great entertainment.

Sign up early as we expect the largest turnout ever. This will truly be the best and most affordable event that you attend in 2009! If you have any questions, please don’t hesitate to contact me at 1-800-339-4513 or email me at debbiebritt@citynet.net. I look forward to seeing everyone at Snowshoe Mountain in September.
# WVRWA’s 24th Annual Technical Conference Tentative Schedule

## Sunday, 9/13/2009

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:00 AM</td>
<td>Golf Tournament</td>
</tr>
<tr>
<td>1:00 PM - 4:00 PM</td>
<td>Registration</td>
</tr>
<tr>
<td>2:30 PM</td>
<td>Horseshoe Competition</td>
</tr>
<tr>
<td>4:00 PM</td>
<td>Backhoe Competition</td>
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<tr>
<td>4:00 PM - 7:00 PM</td>
<td>Cornhole Competition</td>
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<tr>
<td>4:00 PM</td>
<td>Picnic</td>
</tr>
<tr>
<td>5:00 PM</td>
<td>Water Tapping Competition</td>
</tr>
<tr>
<td>7:00 PM - 8:00 PM</td>
<td>Registration</td>
</tr>
<tr>
<td>7:30 PM - 9:30 PM</td>
<td>Bingo</td>
</tr>
<tr>
<td>8:00 PM - 1:00 AM</td>
<td>Junction Restaurant Gathering Place (Music/DJ)</td>
</tr>
</tbody>
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## Monday, 9/14/2009

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
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<tbody>
<tr>
<td>8:00 AM - 4:00 PM</td>
<td>Registration</td>
</tr>
<tr>
<td>8:00 AM - 9:30 AM</td>
<td>1. Opening Session</td>
</tr>
<tr>
<td>9:00 AM - 2:00 PM</td>
<td>Exhibitors’ Setup Booths</td>
</tr>
<tr>
<td>10:00 AM - 12:00 PM</td>
<td>Concurrent Training Sessions</td>
</tr>
<tr>
<td>12:00 PM</td>
<td>Boxed Lunches (Registrants Only)</td>
</tr>
<tr>
<td>12:00 PM</td>
<td>Delegates Luncheon/Business Meeting</td>
</tr>
<tr>
<td>1:30 PM - 4:30 PM</td>
<td>Concurrent Training Sessions</td>
</tr>
<tr>
<td>3:00 PM—4:00 PM</td>
<td>Water Taste Test Judging</td>
</tr>
<tr>
<td>4:30 PM - 7:30 PM</td>
<td>Exhibit Hall Opens/Exhibitors’ Reception</td>
</tr>
</tbody>
</table>

## Monday, 9/14/2009 cont.

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>8:00 PM - 10:00 PM</td>
<td>Bingo</td>
</tr>
<tr>
<td>8:00 PM - 1:00 AM</td>
<td>Junction Restaurant Gathering Place (Music/DJ)</td>
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## Tuesday, 9/15/2009

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>8:00 AM</td>
<td>Board Meeting</td>
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<tr>
<td>8:00 AM - 12:00 PM</td>
<td>Registration</td>
</tr>
<tr>
<td>9:00 AM - 12:00 PM</td>
<td>Exhibit Hall Opens</td>
</tr>
<tr>
<td>11:30 AM</td>
<td>Exhibitors’ Feedback Session</td>
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<tr>
<td>12:00 PM</td>
<td>Lunch on Your Own</td>
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<tr>
<td>12:00 PM - 2:00 PM</td>
<td>Exhibitors Tear-Down Booths</td>
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<tr>
<td>1:00 PM - 4:00 PM</td>
<td>Concurrent Training Sessions</td>
</tr>
<tr>
<td>13. Technology &amp; Benefits of Effluent Sewer and Packed-Bed Filter Treatment Containing Textile Media</td>
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<tr>
<td>14. Employee Law—Wage and Hour Issues</td>
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<tr>
<td>15. RUS Discussion</td>
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<tr>
<td>17. Chemical Feed Pump Usage, Calibration &amp; Maintenance and Pumps &amp; Motors</td>
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<tr>
<td>18. Capacity Assistance Partnership Developing Essential Viability (CAPDEV) and Disadvantaged Business Enterprise Requirements for the DWTRF</td>
<td></td>
</tr>
<tr>
<td>5:00 PM</td>
<td>Banquet, Awards Presentation and Entertainment (Rick K and the Allnighters)</td>
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<tr>
<td>9:00 PM - 1:00 AM</td>
<td>Junction Restaurant Gathering Place (Music/DJ)</td>
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## Wednesday, 9/16/2009

<table>
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<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>8:00 AM - 12:00 PM</td>
<td>Registration</td>
</tr>
<tr>
<td>9:00 AM - 12:00 PM</td>
<td>Concurrent Training Sessions</td>
</tr>
<tr>
<td>19. SBR’s—Tips &amp; Tools for Operations</td>
<td></td>
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<tr>
<td>20. Rate Checkup for Your System</td>
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<tr>
<td>22. PSD &amp; Municipality Board Training Review</td>
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<tr>
<td>23. Funding Agencies Roundtable Discussion</td>
<td></td>
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<tr>
<td>24. Regular Line Flushing Program</td>
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<tr>
<td>12:00 noon</td>
<td>Conference Concludes/Exit Luncheon</td>
</tr>
</tbody>
</table>

Please note that topics, times and dates are subject to change!
**Monday 9/14/2009**

**9:00 AM - 10:00 AM**

1. **Opening Session** (TBD) Plan to attend this session to hear agencies and representatives discuss current and future endeavors dealing with water and wastewater issues in WV.

**10:00 AM - 12:00 PM**

2. **New Limitations for NPDES Permits** - (TBD - Steptoe & Johnson). Explanation of how DEP is modeling streams, the assumptions they are using, and why they are placing limitations on nitrogen and phosphorus when they have never been included before. Also, why the limitations substantially changed from the last permit and new federal guidelines.

3. **Customer Relations** (Michael Harris, NRWA) How do you deal with your customers—those who are problematic as well as those with no complaints? Are customer relations important? Come find out why, how, and what can be gained from maintaining a positive relationship.

4. **Biological Nutrient Removal (BNR)** (Teri Merri-field, HACH Company) What is it and how will it affect your next discharge permit? Tips and tools on how to remove these contaminants. Get ideas of what it would take to upgrade a plant to meet the Chesapeake Bay or Ohio Valley discharge standards.

5. **Comprehensive Water Audits: Accounting for Every Drop** - (PSC). Attend this in-depth presentation and learn the difference between a basic water audit and a comprehensive water audit so that your system can best manage its' resources. Discussion will include leaks, stolen water, meter accuracy, flushing, city uses, fire suppression, and distribution maintenance and how they affect your finances.

6. **Newly Approved Modification to DW-23 (Boil Water Notice) and Companion Procedure DW-37 (Public Notice Rule)** - (WVBPH). This class will provide information on changes that have been made to the boil water notice and the public notice rule.

7. **Hybrid SCADA** - (Mark Place, John P. Place & Jesse Nowacki, Mission Communications). Learn new ideas based on cellular data technology as a way to move toward better more usable data, meet CMOM objectives, stretch budget dollars and reduce O&M costs.

**1:30 PM - 4:30 PM**

8. **Introduction to Wastewater Treatment Processes** (Glen Calthorp, Fluidyne, Corp.) This class will give an overview of the wastewater treatment processes with special attention given to the role of dissolved oxygen. A section on biochemical oxygen demand is also provided. The various methods for measuring dissolved oxygen, the science and measurement of pH and a discussion of solids measurement techniques including a laboratory exercise for total dissolved solids.

9. **Liability of Not Having an Adequate Cross-Connection Control Program & Backflow Surveys & Testing of the Actual Program.** (Dan Parker, WVBPH & Buddy Haines, H&S Controls). Cross-connection control is one of the most important barriers in protecting drinking water and public health. Contamination of a drinking water system through a cross-connection can result in illness or death. Learn what your legal responsibilities are, what the legal consequences of not having a fully developed program are, and what is your overall potential liability.

10. **Office Management Session.** This class will provide information on the following topics: (TBD)
   1) Ethics & Conflicts of Interest
   2) Policies, Procedures, & Employee Handbooks
   3) Time Management Techniques
   4) Standard Records to Keep in the Office
   5) Open Meeting Laws

11. **Hydrants: Repair or Replace** - (TBD) How much life is really left in your hydrant. Attend this session and learn ways you can operate, fix and maintain the old hydrants in your system. This information could add years of life to your hydrants and save your system lots of time, energy, and money!

12. **Threat Preparedness** - (Jeff Smith, WVBPH). This session will present information on preparing for a threat to your system.

   **Emergency Response Revisited**—(Bob Hart, WVBPH). Attend this class to learn how to respond to an emergency when it occurs. Learn why you need to have an Emergency Response Plan, Vulnerability Assessment completed, and Standard Operating Procedures for your system.

**Tuesday 9/15/2009**

**1:00 PM - 4:00 PM**

13. **Technology & Benefits of Effluent Sewer followed by Packed-Bed Filter Treatment Containing Textile Media** - (Matt Paris, Orenco Systems) This class will discuss effluent sewer design and treatment technology.

14. **Employee Law—Wage & Hour Issues** - (Ashley Burton, Pullin, Fowler & Flanagan). This class will discuss issues facing systems’ in regard to personnel issues.
Tuesday 9/15/2009 (cont’d)

1:00 PM - 4:00 PM

15. RUS Discussion - (Randy Plum, RUS). This session will discuss the loans & grants program that Rural Utilities Services provides.

16. Practical Methods for Reducing Energy Consumption (Mike Dill, WVRWA). Are you sure there is nothing that can be done to reduce consumption? Maybe...maybe not. This session will give you tips for conducting a survey that may lead to less consumption and reduce costs.

17. Chemical Feed Pump Usage, Calibration & Maintenance and Pumps and Motors (TBD). This class will demonstrate the usage for chemical feed pumps, how to calibrate them, and the maintenance that they require. Pumps and motors will also be covered.

18. Capacity Assistance Partnership Developing Essential Viability (CAPDEV) (David Acord, WVBPH). This class will discuss developing essential viability which includes planning (managerial), preparing (financial), and operating (technical) expertise for your utility.

19. Disadvantaged Business Enterprise Requirements for the DWTRF (Jeff Brady & Bob DeCrease, WVBPH). This class will summarize the federal requirements for DBE in the acquisition of professional services that a utility might wish to be paid through the DWTRF. This class is intended for utility managers, administrators, and engineers.

Wednesday 9/16/2009

9:00 AM-12:00 PM

19. SBR’s—Tips & Tools for Operations (Mike Dill, WVRWA & Mike Giannini, Bradley PSD) Is an upgrade or replacement in your systems’ future? Attend this class to learn about discharge permits which may require additional treatment.

20. Rate Checkup for Your System (Bill Jarocki, Boise State University) What’s the health of your systems’ rates? Attend this class to learn how to utilize an easy CD that will help evaluate your rate status.

21. Panel and Roundtable Discussion on Problems Facing Chief Plant Operators & Superintendents (Utility Chief Operators). This session will be a panel and roundtable discussion with numerous utility chief operators discussing problems that they are facing as Chief Operators or Superintendents.

22. PSD & Municipality Board Training Review (Calvin Hatfield, WVRWA & PSC) This session will be a refresher dealing with training for PSD & Municipality board members.

23. Funding Agencies Roundtable Discussion (TBD). This session will present the different funding agencies and their funding requirements. (AML, DEP, IJDC, RUS, WDA, WVBPH)

24. Regular Line Flushing Program (TBD). How do you begin to set-up a line flushing program? Attend this class to learn how to set one up and talk with other systems who have a program already established.

Picnic
The picnic will be held at the Mountain Lodge on the back lawn behind the building. Great food and mingling with new and old friends will be one of the highlights of the evening.

Class Locations
All training classes will be held downstairs in the Mountain Lodge.

Exhibit Hall
The exhibit hall will be located in the EXPO Center under the Big Dome.

Gathering Place
The Junction Restaurant located in the Village will be the after hours gathering place for anyone who wishes to mingle and listen to music and dance each evening.

Training Credits Hours
A total of 12.5 hours of credit can be obtained for water and wastewater operators throughout the 4 day conference. Certificate hours will be distributed at the end of the conference from sign-in sheets obtained during each class.

Banquet
The banquet will be held on Tuesday evening in the EXPO Center and will begin at 5:00 pm. Come enjoy great food and award presentations highlighting those systems’ and individuals who have excelled throughout the last year. Rick K and the Allnighters Band will perform.
WVRWA Annual Business Meeting
Monday, September 14, 2009
12:00 PM
The Comedy Cellar in Mountain Lodge
The annual business meeting will be conducted Monday, September 14, 2009 at 12:00 pm. A luncheon will be provided in the Mountain Lodge on the bottom level in the Comedy Cellar. One authorized delegate from each voting member system can attend the luncheon free of charge and attend the business meeting that will follow the luncheon. The Voting Delegate form must be returned before the meeting in order to vote on business conducted during the meeting. There will be a drawing for $100 to be given away at the end of the business meeting so send in your delegate forms today!

Exhibitor’s Information

The exhibit hall will be in the EXPO Center

Set-Up of Exhibit Booths
Monday, September 14, 2009 from 9:00 am-2:00 pm
All booths must be set-up by 2:00 pm

Tear-Down of Exhibit Booths
Tuesday, September 15, 2009 from 12:00 pm-2:00 pm
All booths must be removed from the exhibit hall by 2:00 pm

Exhibitor’s Feedback Session
Tuesday, September 15, 2009 at 11:30 am
The exhibitors’ feedback session will follow the closure of the exhibit hall in order to provide us with feedback information that will be used in planning for the 2010 conference. Please plan to attend in order to voice any concerns or changes that you would like to see happen.

All exhibitor registration forms and payment must be received in order for booth assignments and exhibitor information to be mailed to exhibitors. Exhibit fee must accompany exhibit registration form.

Exhibit Hall Hours
Monday, September 14, 2009  4:30 pm—7:30pm
Tuesday, September 15, 2009  9:00 am—12:00 pm

“EXHIBIT SPACE SELECTION PROCEDURE!!!”
Check online at www.wvrwa.org to see what exhibit spaces are open, view spaces that are already taken, and choose 5 exhibit locations of your choosing. Spaces will be filled on a first-come basis with registration form and fee from completed applications received in the office.

******************************************************************************************
Golf Tournament

Register for WVRWA’s Annual Golf Tournament to be held on Sunday, September 13th. The tournament will begin at 9:00 am with a shotgun start. There are 26 tee times reserved which will accommodate 104 golfers. The fee is $75.00/golfer which includes 18 holes of golf and 1 golf cart. Mulligans will be available for purchase at the course.

To register, fill out the golf registration form and enclose your payment to reserve your spot. If registering as a foursome, all names must be on one form with payment of $300.00 enclosed. Payment must accompany registration form in order to reserve your tee time.

Hole sponsor—$50.00 (meals, prizes, etc.)

Registration and payments must be received By August 1, 2009

Don’t delay, spaces will fill up fast!

Entertainment and Other Activities

Sunday, Sept. 13  Golf Tournament
Sunday, Sept. 13  Horseshoe Competition
Sunday, Sept. 13  Backhoe Competition
Sunday, Sept. 13  Cornhole Competition
Sunday, Sept. 13  Picnic
Sunday, Sept. 13  Water Tapping Competition
Sunday, Sept. 13  Bingo
Sunday, Sept. 13  Junction Restaurant Get Together
Monday, Sept. 14  Exhibitors’ Reception
Monday, Sept. 14  Water Taste Test Competition
Monday, Sept. 14  Bingo
Monday, Sept. 14  Junction Restaurant Get Together
Tuesday, Sept. 15  Banquet/Awards Presentation
Tuesday, Sept. 15  Banquet Entertainment
Tuesday, Sept. 15  Junction Restaurant Get Together

Lodging Information

Snowshoe Mountain Resort

Registration Number
1-877-441-4386

The following buildings are blocked for the WVRWA conference. Each building has available different types of rooms in order to meet your needs as shown by the information sheets that are included in this packet.

- Allegheny Springs
- Seneca Lodge
- Rimfire
- Highland House
- Expedition Station
- Mountain Lodge
- The Inn at Snowshoe

**Please Note**

When making reservations at any of the hotels listed, be sure and mention that you want the block of rooms reserved for WVRWA to get the reduced rates.

Most of the lodging rooms have refrigerators and microwave ovens in them in case you want to bring food with you.

**************************************************

Registration

Registration will be held in Allegheny Springs (which opens up to the village area) in Williams A&B.

Sunday—1:00 pm—4:00 pm
7:00 pm—8:00 pm

Monday—8:00 am—4:00 pm

Tuesday—8:00 am—12:00 pm

Wednesday—8:00 am—12:00 pm
REGISTRATION FORM

(This form may be duplicated for additional registrations)

Name

Phone

System, Company, Agency

County

Mailing Address

City, State, Zip

**FULL REGISTRATION** (Please circle your selection) **For systems serving less than 500 customers, the registration fee is waived. The only cost would be if you plan on attending the banquet: $35.00 banquet ticket required.**

<table>
<thead>
<tr>
<th></th>
<th>Prior to Aug. 1</th>
<th>After Aug. 1</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MEMBERS:</strong></td>
<td>$ 100.00</td>
<td>$ 120.00</td>
</tr>
<tr>
<td><strong>NON-MEMBERS:</strong></td>
<td>$ 200.00</td>
<td>$ 220.00</td>
</tr>
</tbody>
</table>

(Full registration includes Sunday Picnic, Exhibitor’s Reception on Monday evening, Box Lunch Monday, Exhibitor’s Breakfast on Tuesday morning and Banquet on Tuesday evening.)

**SINGLE DAY REGISTRATION** (Please circle your selection)

<table>
<thead>
<tr>
<th></th>
<th>Prior to Aug. 1</th>
<th>After Aug. 1</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MONDAY 9/14/09 (Includes box lunch and exhibitors’ reception)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>MEMBERS:</strong></td>
<td>$ 60.00</td>
<td>$ 70.00</td>
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<tr>
<td><strong>NON-MEMBERS:</strong></td>
<td>$ 100.00</td>
<td>$ 110.00</td>
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<tr>
<td><strong>TUESDAY 9/15/09 (Includes exhibit hall breakfast)</strong></td>
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<td></td>
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<tr>
<td><strong>MEMBERS:</strong></td>
<td>$ 40.00</td>
<td>$ 50.00</td>
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<tr>
<td><strong>NON-MEMBERS:</strong></td>
<td>$ 70.00</td>
<td>$ 80.00</td>
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<tr>
<td><strong>WEDNESDAY 9/16/09</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>MEMBERS:</strong></td>
<td>$ 20.00</td>
<td>$ 30.00</td>
</tr>
<tr>
<td><strong>NON-MEMBER:</strong></td>
<td>$ 50.00</td>
<td>$ 60.00</td>
</tr>
</tbody>
</table>

**MEAL TICKETS ONLY**

Tuesday Banquet – 9/15/09  Number of tickets _____ X $ 35.00 = $ ______

Name of Guest(s): ____________________________________________________

**************************************************************************

REGISTRATION FEE $ _____________

TOTAL AMOUNT ENCLOSED WITH REGISTRATION:  $ ____________

Cancellation Policy

100% refund will be issued if you notify WVRWA by written request prior to July 9, 2009

75% refund will be issued by written request prior to August 8, 2009

50% refund will be issued by written request prior to August 22, 2009

Refund request received after August 24 will not be valid.

Please mail form and payment to: WVRWA, 100 Young Street, Scott Depot, WV 25560
EXHIBIT SPACE REGISTRATION FORM

West Virginia Rural Water Association
24th Annual Technical Conference
Snowshoe Mountain
September 13-16, 2009

COMPANY: ____________________________________________
MAILING ADDRESS: _________________________________________
CITY/STATE/ZIP: ___________________________________________
CONTACT PERSON: ___________________ PHONE (____) _________

EXHIBIT SPACE INFORMATION (required)
Number of spaces required ________ Does your space require an electrical outlet? YES NO
What type of display? FLOOR TYPE TABLE TOP What is the size of the display? _______
I will have a door prize ________ Yes ________ No
My top 5 choices for booth space are: _______ _______ _______ _______ _______ (See diagram enclosed)

Check www.wvrwa.org daily to see what spaces are still open

Please print all exhibitor names that will be at your booth for name badges:
1. ____________________________________________ 4. _____________________________
2. ____________________________________________ 5. _____________________________
3. ____________________________________________ 6. _____________________________

EXHIBITOR FEES (payment required with form to reserve space)
One exhibit space—Current WVRWA Associate Member (8’ tabletop display only) $300.00 _______
One exhibit space—Current WVRWA Associate Member (10’ floor display only) $350.00 _______
One exhibit space—Non-member Company (8’ tabletop display only) $500.00 _______
One exhibit space—Non-member Company (10’ floor display only) $550.00 _______
Additional spaces $250.00 _______
Tuesday Banquet Ticket(s): Number of Tickets _______ x $35.00 _______

AMOUNT OF EXHIBIT FEES ENCLOSED…………………………………………….$___________

CANCELLATION POLICY

100% refund will be issued if you notify WVRWA by written request prior to July 9, 2009
75% refund will be issued by written request prior to August 8, 2009
50% refund will be issued by written request prior to August 22, 2009
Refund requests received after August 22, 2009 will not be valid

Mail registration form to: WVRWA, 100 Young Street, Scott Depot, WV 25560

Mail registration form to: WVRWA, 100 Young Street, Scott Depot, WV 25560
West Virginia Rural Water Association Emergency Response Team is Called to Action!

Once again, the rains came and caused devastation to Southern WV on May 9, 2009. The aftermath left the Town of Gilbert with creek crossings washed out, numerous line breaks, exposed distribution lines, water plant damage and overwhelmed, worn out personnel. With one quick phone call to Debbie Britt, West Virginia Rural Water Association (WVRWA) Executive Director, the WV Rural Water Emergency Response Team was rapidly assembled and headed for action.

Darrell Wellman, General Manager of Lavalette PSD and also WVRWA Emergency Response Committee Chairman and WVRWA Board Treasurer was eager to do what Rural Water does best, “Assist with rapid recovery involving disasters”. Within hours, Darrell was equipped with his troops, Rich Smith, Field Supervisor; Randy Smith, Asst. Field Supervisor and Rob Weaver, Construction Supervisor along with service trucks, trash pumps, a backhoe, cutting and welding equipment, generators, chop saws, and the WVRWA Emergency Response Trailer. Wellman said, “Most of the work we accomplished in Gilbert is the very same things we do daily in our own systems. The big difference is that most of us do not have this much damage dumped on us at one time without the manpower and resources to repair it. We are very fortunate to have WVRWA and our Emergency Response Teams to assist in these emergencies.”

Two counties away, Mike McNulty, General Manager of Putnam PSD had quickly assembled his troops, John Inghram, Supt. of Water Quality; David Mercer, Supt. Of Project Development; James Evers, Billing Supervisor; Chad Bowles, Foreman; Richie Handley, Utility Technician; Les Adkins, Utility Technician; and John Thaxton, Utility Technician along with an excavator, utility trucks, chop saws, trash pumps and other equipment to aid in the disaster relief.

Together, this Dynamic Duo of PSDs 12 water experts teamed together as one and made the necessary repairs to restore service and plant operations within 2 days. They also covered lines the flooding had exposed and reburying them to prevent further breaks. “When one member of the West Virginia Rural Water Association family is in trouble, it affects all of us. We are happy to do whatever we can to help,” McNulty said.

“I am proud to say that the West Virginia Emergency Response Team was very effective in working with the towns affected by this flooding and that we were able to send resources to the areas that were effected,” Britt said. “We are continuing to grow our Emergency Response Team and are confident that we can help systems out in dealing with whatever disaster occurs next.”

Emergency Response Committee Chairman Wellman further stated, “I hope other systems that have the ability and resources to assist in times like these will sign on to our WVRWA Emergency Response Team and further reinforce the effectiveness of our efforts to help. Can you imagine the result if no one was willing to help your town or system when a disaster strikes??”
Public Relations (PR) is about the marketing of ideas and putting forth your system’s message in an easily understandable and clear manner. It entwines the daily policy of effective, honest, structured communication. It involves interaction with your customers, the media, state and federal agencies, other water utilities and your employees. Public education is the key to a good PR program. Public education is informing decision-makers and consumers that clean potable water comes with a price tag. And letting your consumers know what their money is being spent for and explaining the consequences of a utility that is not properly funded or managed. Management plays a critical role, if a utility has unlimited funds, but is poorly managed, the system and public will suffer the consequences.

To ensure viability and stability, your utility needs an effective public relations program. It is essential that every employee understand and be aware of the program. Every employee plays a major role in the image of the utility. Effective public relations project the image and convey the message your utility wants to portray at all times. It involves planning, commitment and consistency. And above all it must be customer based because the customers are the reason your utility exists. Utilities have a responsibility to keep customers informed in a timely manner. Anything less can leave the wrong impression of impropriety.

Public education is the key to a good PR program.

The way most utilities communicate with the public is by publishing the Consumer Confidence Report (CCR). This report is a water quality report and can generate questions about your utility. But there are other PR elements that can be more effective promoting your utility. A system newsletter is an excellent means to provide customers with communication plans for system upgrades and other improvement projects that have been completed or are in future plans. It can be a means of publicizing your emergency response plans and disaster situations. Many utilities now have websites that their consumers can navigate to learn more about their water system. Local newspaper articles and school presentations are good delivery vehicles for your PR program.

Public relations are an important management practice because, ultimately, it is the customer who must be satisfied with the quality of the delivered product and the service they receive from the utility. Customer relations include education, communication and involvement. The utility needs to understand customer values and expectations. There are several variables that customers use to determine the level and quality of service given by the utility. Are you reliable? Are you consistent in your performance and dependability? Your willingness or readiness to provide service shows that you are very responsive. Along with faith comes competence in your utility to possess the required skills and knowledge, by the employee, to provide the service. Courtesy, politeness, respect, friendliness of utility personnel goes a long way with the customer in determining the amount of confidence that they have in your utility.

Communicating with your customers is vital. Keeping customers informed in language they understand and probably even more important is listening to their problems and concerns. Trustworthiness, believability, honesty, having the customer’s best interest at heart enhances the utility’s credibility. The utility needs to make the effort to
understand and know the customer’s needs. Some intangibles to providing good customer service are the physical evidence of service: they see you repairing a water leak in a timely manner, reading meters, flushing hydrants etc. Keep the appearance of personnel, buildings, grounds, vehicles, hydrants, tanks, and other components looking neat and clean.

In closing: public relations begin with getting organized. The utility needs to clearly state the goals of the program. Before going public with your ideas and your PR campaign do your homework. Be certain of your facts and figures and know exactly how your proposed goals will impact your customers. Empower customers with knowledge. Knowledge means power, strength, and comfort. If people understand a service’s value and importance in their lives, they will support it and pay for it. Hold true to your PR goals and motivate your customers. To achieve this, boards, councils, employees and managers must believe in the goals and they also must be motivated. The team concept is vitally important for success.
Chemical Feed and Process Equipment for Water & Wastewater

**Process Equipment**
- US Filter/Aerator Products
- US Filter/CPC
- US Filter/DAVCO
- US Filter/Envirex Inc./Chaffont
- US Filter/GPC
- US Filter/Jet Tech
- US Filter/JWI
- US Filter/Memoor
- US Filter/R.J. Environmental
- US Filter/UltiGuard
- US Filter/Wallace & Tiernan
- US Filter/Water Champ
- US Filter/Zimpro
- Unifilt Corporation
- United Industries
- AB Marktech
- Aero-Mod
- Hazleton Environmental

**Solids Handling**
- Eutek Systems
- HP Wastewater Management
- US Filter/Asdor/E&J
- US Filter/Envirex, Inc.
- USEP

**Chemical Feed/Disinfection**
- Force Flow (Scale)
- I.W. Technology (UV)
- US Filter/Water Champ
- US Filter/Stranco, Inc.
- US Filter/Wallace & Tiernan
- LMI

**Valves/Screen**
- Harry Pratt Company
- Hydro Gate Corporation
- Johnson Screen (Intake)

**Chemical Scrubbers/Odor Control**
- US Filter/R.J. Environmental
- Purafil – Div. of Environ. Systems

**Support Products**
- Bulk Conveyor Specialist, Inc.
- Conservatek Industries
- Custom Structures Co.
- Delta Fiberglass
- ESCOR
- GNA, Inc.
- Online Engineering
- MFG

**Blowers/Pumps/Mixers**
- US Filter/EMU
- Hoffman Air & Filtration
- US Filter/Asdor/E&J

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Jennifer J. Miller, P.E.
Project Engineer/Manager

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Fax 843.552.8852
Call 513.257.8991

E-Mail: Malkmus.sm@avkus.com
Once upon a time, a young man, “born of the wild, raised by wolves” (as his wife sees it) was holding dreams of success. With money tight, his dreams were in the hands of his ability to raise and sell pigs for his college education at WV Institute of Technology. Several years later, an engineering career blossomed and his path was set for a rewarding future. He obtained his first job at the DNR Construction Grants office for 4 years and then moved on to G.A. Tice for 1 year, PSC for 2 years before finding a home at Logan County PSD for 19 years.

Hearing the “not so good” news of an instrumental player in the Water and Wastewater Operations/Management leaving, leaves me with mixed emotions. “Happy” that his career prevailed excellence and has led him to a change he wanted, but “Sad” that communities and WVRWA have lost a valuable asset. The press release below sums up his commitment towards communities, as for his involvement with WVRWA, he was appointed to the Board of Directors in the early 90’s, during his terms he served as Vice-President and President of our Association. Almost 18 years he was associated with the many legislative topics and battles that the WVRWA conquered, not to mention the participation in forging the direction of PSC and Health Department regulations for the benefit of utilities and their customers, his knowledge and expertise will be missed.

Press Release

The Logan County Public Service District regrettfully announces the resignation of Rick Roberts, the Managing Engineer of the District for the last 19 years. Mr. Roberts is leaving the District to work in the consulting engineering sector. Mr. Roberts’ tireless work has resulted in safe, reliable water and wastewater service made available to more than 10,000 families as well as improved fire protection and property values throughout the area. During his time with the District, Mr. Roberts was responsible for the planning and implementation of the following completed and ongoing water and wastewater projects:

<table>
<thead>
<tr>
<th>Project</th>
<th>Year Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Huff Junction/Green Valley Water Project</td>
<td>1989</td>
</tr>
<tr>
<td>Mallory/Davin Water Project</td>
<td>1991</td>
</tr>
<tr>
<td>Neibert/ Taplin Water Project</td>
<td>1992</td>
</tr>
<tr>
<td>Mineral City/Cooks Addition Water Project</td>
<td>1994</td>
</tr>
<tr>
<td>Crooked Creek Water Project</td>
<td>1994</td>
</tr>
<tr>
<td>Rum Creek Water Project</td>
<td>1994</td>
</tr>
<tr>
<td>Godby Branch Water Project</td>
<td>1995</td>
</tr>
<tr>
<td>Cow Creek Water Project</td>
<td>1996</td>
</tr>
<tr>
<td>Dingess Run Water Project</td>
<td>1996</td>
</tr>
<tr>
<td>Trace Fork Water Project</td>
<td>1996</td>
</tr>
<tr>
<td>Whitman Creek Water Project</td>
<td>1997</td>
</tr>
<tr>
<td>Regional Jail Water Project</td>
<td>1997</td>
</tr>
<tr>
<td>Harts Creek Water Project</td>
<td>1997</td>
</tr>
<tr>
<td>Elk Creek/Verner Water Project</td>
<td>1998</td>
</tr>
<tr>
<td>Mill Creek Phase I Water Project</td>
<td>2000</td>
</tr>
<tr>
<td>Crawley Creek Water Project</td>
<td>2000</td>
</tr>
<tr>
<td>Pine Creek Water Project</td>
<td>2000</td>
</tr>
<tr>
<td>Mill Creek Phase II &amp; III</td>
<td>2002</td>
</tr>
<tr>
<td>Garrett Fork Water Project</td>
<td>2002</td>
</tr>
<tr>
<td>Atenville Water Project</td>
<td>2004</td>
</tr>
<tr>
<td>Huff Creek Water Project</td>
<td>2004</td>
</tr>
<tr>
<td>Rocky/Caney Branch Water Project</td>
<td>2005</td>
</tr>
<tr>
<td>Phase I Wastewater Project</td>
<td>2005</td>
</tr>
<tr>
<td>Holden Water Project</td>
<td>under construction</td>
</tr>
<tr>
<td>North Fork Water Project</td>
<td>under construction</td>
</tr>
<tr>
<td>Phase II A Wastewater Project</td>
<td>under construction</td>
</tr>
</tbody>
</table>

Due to Mr. Roberts’ dedicated efforts, more than $90,000,000 in grant and low interest loan dollars were invested in Logan, Mingo, Wyoming, Lincoln and Boone Counties in the form of these much needed infrastructure projects. Under his guidance, the Logan County Public Service District has grown into one of the largest Public Service District’s in the state and is well respected around the state for the quality of its operations. Mr. Roberts is also highly regarded in the industry for his expertise in project implementation from the planning stages throughout construction. Mr. Roberts’ hard work will leave a great and long lasting legacy to the greater Logan County area for many years to come.
Does your water system know where every valve, line, PRV, and blow-off is in the distribution system? If you do, that is great. But, I can probably guess that more than most don’t. Why is it that when lines are moved or added, they’re not put on paper? When valves are put in service or replaced, they are not marked down. And, when PRV and blow-off markers are knocked down and not replaced. If they are not on paper, and the grass and gravel cover them up, how long does it take to forget where they are? Without taking the time and adding the changes to an existing map; in time, this lack of practice could make it very difficult to work in the distribution, but also, to operate the plant.

Other situations, where putting it on paper is needed, are when you don’t have the “as-builts” and you are looking at proposed prints. Sure, some things will be right. But, we all know that things change from the start of engineering to the “in-the-ground” finished project. Or, how about the employee that knows where they are, but they keep it all “upstairs”, because that is job security for them? Unless the employee is going to be there “24/7” and 365 days a year and for eternity, then that’s another good reason someone should start putting it on paper.

But, remember it all starts with paper and mechanical writing.

I am sure all systems have valves that don’t hold and they have to shut many valves to stop or slow down the flow and pressure to be able to fix a water leak, without knowing where valves are. Then, 3 to 4 hour jobs turn into “all-nighters”, without proper mapping. Also, there are times when a big leak will occur and it won’t surface. Without having proper mapping, it can make it very difficult to find those sneaky leaks.

There are systems that have the resources and funding for digital computer mapping. And, I know there are a lot of systems who don’t. But, remember it all starts with paper and mechanical writing. You can draft it or it can be as simple as using a pencil and a napkin from lunch. Don’t let yourself say, “Well, I don’t know” or “It has been like this for years.” Start doing something about it. Start carrying paper and writing utensils with you or make sure it is somewhere you can get to it quickly. When you dig up a line for repair or install a valve and hydrant, record how far from the curb or permanent structure it is. Also, record how deep and what size and material it is. After the job is done, make time at the office to mark it on the existing map.

Doing this, on a consistent basis, will give you a good understanding of where the infrastructure lays in your system. It will also cut down on time and effort when problems arise.
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Did you, as an operator or superintendent, take over a plant and realize that there was no documentation of how that plant was supposed to run? Have you ever forgotten how to do a task and there was nothing available to instruct you on how that particular job was to be done? Did you ever have a new employee and had to instruct them through memory all the tasks that needed to be done on a routine basis? Well, that is why every plant or system needs to have Standard Operating Procedures (SOPs) in place. SOPs can be used for training purposes, to meet governmental rules and regulations, and as checklists to insure the job is done properly.

A Standard Operating Procedure is a written instruction that documents a routine or repetitive task. The SOP provides operators with the information they need to perform a job properly. It makes sure the job is done right, if the procedure is followed. In the course of my career, I’ve heard standard operating procedures called standard operating guidelines, standard protocols, standard instructions, worksheets, etc. The name isn’t important (though be consistent at your plant or system), it’s the content that is important. Standard Operating Procedures are intended to be specific for the particular plant or system where they are located.

The two most used SOPs that I’ve seen are plant start up and shut down and analytical laboratory tests. These are just two examples of SOPs that may be used. Review your plant processes and determine what is important and then decide which activities need an SOP. SOPs should be simple, step by step and not complicated.

While everybody has a different view of how to write a procedure, the end result should be a clear and concise document that is easily understood. The person who writes the SOP should be an operator or supervisor who actually does the task or uses the process. Remember, there should be no doubt in the readers mind as to what is required. The SOP needs to be written so that an operator with basic understanding and knowledge can perform the task without direct supervision. Make sure that the first SOP that needs to be written is a very simple task to be performed. This will build your confidence to go to more difficult procedures that may be harder to simplify. Keep the SOP current and review all SOPs on a periodic basis. If it’s a one or two man show, the review process is simple, you’re it. In a larger organization, there should be a process in place to write SOPs and to keep SOPs current. Ensure that the procedures remain current and appropriate for the task and determine if the SOP is still needed.
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Trey Hornor, P.E., President and Managing Partner
In late April 2009, Agriculture Secretary Tom Vilsack announced the selection of over $600 million in water and environmental projects that are being funded immediately with federal funds provided through the American Recovery and Reinvestment Act. The projects will help provide safe drinking water and improved wastewater treatment systems for rural towns and communities in 34 states. They are the first of many projects that will receive Recovery Act funds to improve rural water and waste disposal systems.

“Aging water and waste infrastructure systems threaten the ability of rural communities to provide clean, reliable drinking water to residents and protect precious environmental resources,” said Vilsack. “These investments will help bring increased economic benefits to rural America by providing needed water, water systems and creating jobs.”

In West Virginia, the City of Belington, Barbour County, has been approved for a $1,750,000 loan and $1,205,000 grant to assist in the complete renovation of the existing wastewater treatment facility to dramatically increase the plant capacity and allow the plant to meet effluent discharge requirements. Improvements will consist of upgrading the City’s existing wastewater treatment plant with a biological treatment system to a capacity from 220,000 to 365,000 gallons per day. The project will benefit approximately 784 residential and commercial users.

The Town of Grantsville, Barbour County, will utilize their $1,075,000 loan and $55,000 grant to construct a new 300,000 gallon water storage reservoir along with the necessary waterlines. The project will also include a transmission line to a health care facility for the purpose of reinforcing the current fire protection to the facility. The new reservoir is needed to provide an additional water storage reserve for the Town and two other public water providers that purchase water from the Town of Grantsville. The project will benefit approximately 1,600 households and businesses.

Also in Barbour County, the City of Philippi has been approved a $6,425,000 loan and $1,287,000 grant to assist in replacing the City’s existing water treatment plant which was built in 1921. The plant is near the point of failure due to age and deterioration. Funds will also be used to replace failing waterlines that are causing an estimated water loss of up to 45%. This project will alleviate a potential emergency situation and allow the City to continue to provide safe and reliable water service to its citizens.

In Randolph County, the City of Elkins, was approved for a $28,075,000 loan and $1,000,000 grant to replace the current water treatment plant which was built in 1921. The plant is near the point of failure due to age and deterioration. Funds will also be used to replace failing waterlines that are causing an estimated water loss of up to 45%. This project will alleviate a potential emergency situation and allow the City to continue to provide safe and reliable water service to its citizens.

Also in Randolph County, Huttonsville Public Service District was approved for a $1,000,000 grant to assist in removing and replacing aging sanitary sewer lines that have been identified to be at the point of failure. Construction will involve approxi-
approximately 2.7 miles of collection line, 83 sanitary manholes, new pumping equipment, and necessary appurtenances. The project will also satisfy a West Virginia Department of Environmental Protection order. This funding is in addition to the $1,050,000 loan and $850,000 grant recently awarded during a check presentation ceremony in recognition of Earth Day on April 29. The funds awarded during the Earth Day celebration, partnered with other funding, will help replace the existing collection systems in the communities of Dailey, East Dailey and Valley Bend. A significant inflow and infiltration problem exists in these areas. Existing sewer lines that were not replaced in the Phase I project are roughly 70 years old are mainly made of clay pipe. Approximately 460 customers will benefit from this proposed project.

Hodgesville Public Service District, Upshur County, was approved for a $1,500,000 loan and $240,000 grant to help extend public water service to 51 households that are currently without a safe and reliable source of water. Residents in the proposed service area utilize private systems that produce water of insufficient quantity and quality. Construction will involve approximately 7.5 miles of waterline.

Funds approved in the amount of a $350,000 loan and $400,000 grant for Pleasant Hill Public Service District, Calhoun County, will be used to construct a new 100,000 gallon water storage tank and 3,400 feet of waterline to connect the tank to the District’s existing water distribution system. The project will alleviate frequent service outages due to water main ruptures and provide a greater degree of reliability to the District’s water customers, particularly the Pleasant Hill Elementary School. Approximately 667 households, businesses and schools will receive improved water service as a result of this project.

The City of Romney, Hampshire County, was approved to be the recipient of a $510,000 loan for construction of a power system upgrade for the existing water plant with the installation of a new generator. This project will provide a secondary power source for the water plant in the event of an electrical power failure. The project will benefit approximately 2,179 households, businesses, and schools.

A $1,839,000 loan and $1,396,000 grant was approved for Gauley River Public Service District, Nicholas County, WV. Funds will be used to provide public water and fire protection service to 160 households that are currently without a safe and reliable source of water. Residents within the proposed service area currently rely on private wells that produce water with high levels of iron and magnesium. Construction will involve approximately 8 miles of waterline and necessary appurtenances.

Crum Public Service District, Wayne County, WV, was approved for a $1,100,000 loan and a $1,956,000 grant to help extend public water service to 295 additional households that are currently without water service. Residents in the proposed service area rely on wells, cisterns, and springs that produce water of insufficient quantity and quality. Construction will involve approximately 20 miles of new waterline and necessary appurtenances.

Also in Wayne County, WV, Lavalette Public Service District was approved for a $237,000 loan and a $180,000 grant to provide public water and fire protection service to 177 households and small businesses that currently rely on contaminated and/or inadequate private water supplies. Construction will involve approximately 15 miles of waterline and necessary appurtenances.

Funds were also approved to extend public water service to 74 additional households of Big Bend Public Service District, Summers County, WV, that currently rely on private systems that produce water of insufficient quantity and quality. Construction will involve four miles of waterline and one 120,000 gallon water storage tank. The project also consists of upgrades to the water treatment plant to increase the daily production rate by 1.5 hours.

A $662,000 loan and $824,000 grant was approved for the Town of Gilbert, Mingo County, WV. Funds will be used to provide quality and dependable public water and fire protection service to 170 rural households, churches, and businesses. Construction will involve approximately 3.7 miles of waterline, eight fire hydrants, and necessary appurtenances. Residents in the proposed service area currently do not have a safe and reliable source of water.

Red Sulphur Public Service District, Wayne County, WV, was approved for a $1,100,000 loan and a $1,956,000 grant to help extend public water service to 295 additional households that are currently without water service. Residents in the proposed service area rely on wells, cisterns, and springs that produce water of insufficient quantity and quality. Construction will involve approximately 20 miles of new waterline and necessary appurtenances.
District, Monroe County, WV, was approved for a $600,000 loan and a $1,400,000 grant to extend public water service to 126 rural households that currently rely on private sources such as wells and cisterns for drinking water. These sources often produce water of poor quality and quantity. Construction will include approximately 12 miles of new waterline along with fire protection.

The City of War, McDowell County, was approved for a grant of $180,300 to replace 2.2 miles of failing waterline in the downtown area of War. This is subsequent funding to complete Phase Three of a six phase project to completely replace the City’s deteriorated water distribution system. The City was also approved for a separate grant in conjunction with phases Two and Four of the overall project in the amount of $217,500. This grant will complete the funding for these phases to replace 3.6 miles of failing waterline in outlying areas and construct a new water storage tank. Rural Development funding for these combined phases will directly benefit 493 households and small businesses by ensuring a continued source of safe and reliable water.

USDA Rural Development’s Water and Environmental Program provides loans and grants to ensure that the necessary investments are made in water and wastewater infrastructure to deliver safe drinking water and protect the environment in rural areas. More information about USDA Rural Development can be found at www.rurdev.usda.gov. Funding of individual recipients is contingent upon their meeting the terms of the loan or grant agreement.

President Obama signed The American Recovery and Reinvestment Act of 2009 into law on February 17, 2009. It is designed to jumpstart the nation’s economy, create or save millions of jobs and put a down payment on addressing long-neglected challenges so our country can thrive in the 21st century. The Act includes measures to modernize our nation’s infrastructure, enhance energy independence, expand educational opportunities, preserve and improve affordable health care, provide tax relief, and protect those in greatest need.

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Warm Springs PSD Gets a New Plant

Warm Springs Public Service District (PSD) finally has a new treatment plant. The PSD’s old plant was a 0.4 million gallon per day (MGD) orbal ditch. It was one of the first orbal ditches in the state, if not the first. The plant that they opted to go with, was a 1.7 MGD Schreiber process. The cost of the plant was about 12 million dollars, with line extensions of about 3 million dollars.

I have heard of Schreiber plants many times before, but mostly in Pennsylvania. The only other Schreiber plant that I know of in West Virginia is the wastewater treatment plant in Clay. It looks like a package plant compared to Warm Springs’ new plant. The unmistakable characteristic of the Schreiber plant is the rotating bridge on the aeration tank. It does not rotate slowly like a circular clarifier, but at an almost dizzying pace.

Schreiber’s Model GR basin configuration utilizes Schreiber’s patented Counter Current® Aeration system, which provides high efficiency aeration and separate low energy mixing for activated sludge. Designed for smaller flows, the GR unit incorporates aeration and clarification within the same structure for optimum space utilization. A single GR aeration / clarification basin is capable of handling average daily flows to 1.5 MGD. Other basin configurations are available for larger flows and loads.

The GR model utilizes a circular tank with an aeration diameter up to 168’ with typical sidewater depths from 10’-20’. Warm Springs’ aeration diameter is 90”. Circular structures provide the most economical construction - minimum concrete and excavation with maximum basin volumes. A concentric internal wall is built within the aeration tank to form the clarifier structure. Helical scraper assemblies are suspended from a lightweight beam arm that rotates within the clarifier section of the basin. Independent from the clarifier arm, flexible membrane diffusers are suspended just inches above the basin floor within the aeration ring from a peripherally driven rotating aeration bridge. The continuous rotation of the bridge in the aeration ring provides constant mixing (separate from aeration) with minimal energy consumption. Counter current motion of the diffusers through the water provides independently controlable, enhanced fine bubble aeration for high oxygen transfer efficiency. The design of Schreiber’s diffusers permits 100% turndown of aeration without sacrificing mixing.

With Counter Current® Aeration, the air to the diffusers may be turned off as the aeration bridge continues to mix the basin. In a single basin, a continuous sequence of oxic, anoxic, and anaerobic phases can be achieved as a result of the ability to turn air on and off to the diffusers while the continuously rotating aeration bridge maintains the organics in suspension. It is by this advanced concept that the GR unit becomes a Continuously Sequencing Reactor (CSR) for biological nutrient removal, Schreiber’s 21st century advancement over the Sequencing Batch Reactor (SBR). Dissolved oxygen (D.O.) probes are used along with D.O. controllers to turn the diffusers off and on.

Schreiber’s Model SFB rectangular Grit & Grease Removal system consists of two rectangular concrete channels sharing a common wall. One channel contains equipment for the removal of grit while the other channel is devoted to the collection and removal of grease. The operation of the grit and grease removal is automated for minimal operator involvement by using PLC controls for maximum operating efficiency.

The Schreiber Grit & Grease Removal system can handle minimum to maximum peak flows with the same efficiency. A minimum tank length of 35’ assures no short-circuiting and maximum removal. Typical detention time is 5 minutes.
for the peak design flow. Three minutes can be considered for excessive peak flows or of short duration.

The aerated grit chamber permits the flow to enter directly into a spiral flow rotational pattern, which is controlled by the airflow rate to submerged diffusers. The spiral rotation scours and washes the grit and then deposits the grit in a channel at the bottom of the tank. A grit pump, mounted to a discharge pipe just above the channel removes the grit and water as the traveling bridge moves down the channel. The grit is discharged into a transport trough on the side of the unit and into a grit classifier for washing and dewatering.

The grease within the sewage will make contact with air bubbles that provides buoyancy. The divider wall between the grit and grease extend below the water level about 6”. The opening has a baffle system that permits the combiner air and grease to pass under the wall and float to the water surface. The floating grease is transported to one end of the channel by Schreiber’s patented air-skimming grease removal system. A small number of air lances, extending across the width of the grease channel, are spaced along the length of the channel. Nozzles mounted to each air lance direct the escaping air, which continuously transports grease to a removal screw at one end of the grease channel. Continuous removal of grease helps to eliminate build-up during peak flow events. Schreiber’s patented air skimming system, also available as an equipment retrofit, requires a minimal amount of air, supplied by either a small blower or an existing air supply

Most of the equipment at the plant, such as the return activated sludge (RAS) screw pumps, are Schreiber equipment, however the PSD went with a Lakeside Raptor® for their bar screen. After the completion of the plant they purchased a 36D Rotary Fan Press from Prime Solution for biosolids processing, which is capable of producing 1,050 dry pounds per hour.

Warm Spring PSD employees are very satisfied for the most part with the plant. The new plant will give many years of service and provide excellent nutrient removal and final effluent.

1.http://www.schreiber-water.com

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    = (7.5 lbs/day)/(1.5 MGD x 8.34) =
    = 7.5/12.51 mg/L
    = 0.60 mg/L

Chlorine demand = Chlorine dose – Chlorine residual
    = 0.60 mg/L – 0.4 mg/L = 0.2 mg/L

ANSWERS TO WATER QUIZ:

1) A  6) B
2) B  7) D
3) C  8) B
4) D  9) A
5) B  10) A
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Wise Words When Dealing With Employee Reprimands

Many water and wastewater general managers handle their employee reprimand procedures in a variety of ways. There are definitely right and wrong ways to warn an employee? Most managers learn this along the hard road of experience and after years of dealing with many different personality types. The goal should always be bringing the employee’s conduct and performance to meet expectations.

The need for an employee reprimand can occur for many reasons, such as arriving late for work, insubordination, poor job performance, or a host of other policy violations. The reprimand can come as a written warning, reduction in wages, or just a private discussion about the problem. The odds are much greater than an employee will react more positively to a reprimand when it is done professionally.

Why do some managers fail to meet employee problems head-on? It’s been my observation that it boils down to confrontation. It can be a bit intimidating for many managers. The process of criticizing an employee can be stressful and, if not done properly, the situation can worsen. By using a condescending tone, a manager runs the risk of alienating the employee and doing more damage than good. For that reason, managers should consider the offense and develop a standard reaction to the violation for all staff members. Consistent discipline is essential and everyone should always be treated the same.

Consistent discipline is essential and everyone should always be treated the same.

In the workplace, showing favoritism to one employee can alienate the rest of the staff. Petty rivalries can ensue and these usually fester until a complete staff meltdown occurs. A manager should refrain from handing out light punishment for an employee reprimand simply because he or she is friends with the offending employee. It can do damage to the morale in the workplace. To do so sends the wrong message to the reprimanded employee, one that tells he or she that they can do it again and again.

So what is the right way to confront an employee? The best way is to be honest and follow the precedents that are already in place. This is where an employee handbook is essential. Offenses and consequences should be spelled out in black and white. Proper forms for reprimands should be a part of the handbook or policy manual. These rules should always apply to everyone. It is up to the person in charge to decide the employee reprimand, just be sure to follow through with other scenarios in the same way, again as stated in your utility’s policy manual or handbook.

By being up-front with employees about the rules and enforcing the rules fairly, a manager stands a greater chance of maintaining morale in the workplace. Don’t forget to issue private verbal warnings as an indicator of something more serious to follow, but do so with the betterment of the utility in mind.

Unfair or unpredictable treatment can affect the morale of the entire workplace in a negative way. A manager should refrain from “raging out” when discussing a problem with an employee. The manager should always speak in a calm yet authoritative voice, without any sign of malice. A manager must display that he or she is in charge and do so with professionalism and self-control. Consistency and strict adherence to the utility’s written policies will greatly benefit a manager if the matter escalates to a legal situation.

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The Wizard of Ox (idation) – Part 2 of 4
Starring: Potassium Permanganate (KMnO4)

The next fork in the road is to feed the potassium permanganate. Do you dry feed to a solution tank or do you batch mix a solution? Unless you are a larger plant, you probably mix a batch of solution in a barrel or tank. If so, mix a solution strength between 0.5% and 3%. (Warning, anything stronger and you will need to use hot water to help the potassium permanganate dissolve into solution.) Regardless of solution strength, it’s a good idea to run a mixer for at least 30 minutes after adding the potassium permanganate. Now, grab Toto (the calculator) and calculate your batch mix! (Note: depending upon the manufacturer, potassium permanganate is between 95% and 99 % active ingredients.) To calculate solution strength, use the following formula:

\[
\text{% solution strength} = \frac{\text{Weight of chemical, lbs} \times \text{Percent available active ingredients}}{\text{Weight of water in solution, lbs}}
\]

If you want a 3% solution in a 100 gallon tank, then:

\[
3\% = \frac{? \times 99\%}{100 \text{ gal} \times 8.34 \text{ lbs/gal}} = \frac{3\% (100 \text{ gal} \times 8.34 \text{ lbs/gal})}{99 \%} = 25.3 \text{ lbs}
\]

In other words, you would need to add 25.3 pounds of potassium permanganate to 100 gallons of water to produce a 3% solution. Remember, this is the strongest solution you would want to make up to avoid problems.

Don’t get scared yet Dorothy because now you need to determine how many pounds of potassium permanganate you need to add to your reaction chamber to treat your current flow.

\[
\text{lbs of KMnO4} = \text{dose} \times \text{Mlb of water}
\]

or

\[
\text{lbs of KMnO4} = 2.95 \text{ ppm} \times \frac{(450 \text{ gpm} \times 1440 \text{ min/day} \times 8.34 \text{ lb/gal})}{1,000,000} = 15.9 \text{ lbs}
\]

Information for this article was gathered from the following sources:
Reducing Manganese in Water with Potassium Permanganate: Carus Corporation
Manganese Removal in Drinking Water Systems: South Gippsland Water, by Ravi Raveendran, Brian Ashworth & Bryan Chatelier
Chemical Feed Calculation: Parkersburg Utility Board, Water Treatment Plant
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WVRWA Scholarship Recipients

West Virginia Rural Water Association (WVRWA) is pleased to present two (2) $1000.00 scholarships to Ms. Rebecca Morgan and Mr. Parker Wolfe for their academic and community achievements.

There were twenty (20) applicants for the WVRWA scholarship this year and selecting two individuals to receive this scholarship was very hard for the committee. This scholarship will be used to help defray the cost of tuition, books, or room and board at an accredited institution of higher learning.

Applicants were judged on the qualities of leadership responsibilities in community and school activities as well as grade point average. Also, selection was based on awards, honors, academic record, career goals, and financial need.

WVRWA congratulates Ms. Rebecca Morgan and Mr. Parker Wolfe.

Ms. Rebecca Ann Morgan, daughter of Tamara S. Morgan, Treasurer from Oceana Municipal Water is a graduate of Westside High School where she lettered in Volleyball, National Honor Society, and Honor Guard for Graduation, Governor’s Summer Academy, and the Governor’s Symposium. Ms. Morgan will be attending Concord University in Athens, WV where she plans on majoring in Accounting.

Mr. Parker Wolfe, son of Kimberly D. Wolfe, Dispatcher from Putnam PSD is a graduate of Winfield High School where she was a member of the National Honor Society, Teenage American Republican Society, Soccer Team, Soccer Team Captain, Faithful Attendance, and Student of the Month. Mr. Wolfe will be attending a 4 year college or university in the fall of 2009.
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How Do I Attract Visitors to My Website?

Apart from targeting specific keywords with the content of your site, you will benefit substantially from other people linking to your website. In the past, this led to the practice of link swapping, in which you wrote to the webmaster of another site and offered to add a link to their website if they would add a link to your website from theirs. This might have fooled Google for a while, but such practices these days are likely to damage your ranking in Google rather than enhance it. So, by all means include genuine links to others within your market sector, but do not adopt link swapping as a practice to manipulate the search engines as you will suffer in the long run.

Each page of a website has an associated set of so-called Meta tags, which is a list of keywords relating to the content of that page. The original idea was that search engines would have to read only the Meta tags in order to process and correctly index web pages, and would not have to analyze the content of the page. However, Meta tags were too easy to manipulate, so Google decided to ignore Meta tags completely and inspect the textual content for itself. It is worth using Meta tags however, as some other search engines still use them.

Provide useful information on your website to potential customers of your business and design your website so that it is easy to use.

How Do I Know How Successful My Website is?

Your web hosting company will make statistics available to you regarding your website. This will include the number of visitors to your website each month, the number of pages viewed (from which you can calculate the average number of pages per visitor), the number of requests for each page, which search terms were used in search engines to find your pages, the pattern of requests over a 24 hour period, and so on. Such information enables you with a single page of information, it is like dangling a single line into a vast ocean. Your single page may be very effective if you have the right bait, but generally you stand a better chance of attracting visitors if you have more pages of useful information. A collection of pages of useful information is more like casting a net into the ocean than dangling a single line.

Finally, be sure to include your website address on all promotional materials, whether it is on business cards, brochures, t-shirts or company vehicles.
you to build up a profile of visitors to your site, which you should compare with your targeted customer profile.

Pretend that you don’t know about your website and type in some relevant search terms in a search engine. Does your website appear in the results list?

Try to get users involved in your website. Encourage visitors and customers to register for information updates and encourage them to return to your site and provide feedback on how it can be improved.

Summary

There is a lot more to having an effective web site than just filling in an HTML template and getting it hosted. Your website needs to

- Convey your company’s image and brand
- Be easy to use
- Meet user’s expectations
- Enable visitors to find what they are looking for quickly.

Websites need to be actively maintained, as those that do not change for long periods are classified by visitors and search engines alike as being ‘dead’. So do plan in some time for regular reviews and/or website maintenance.

If you have any questions or comments please give me a call at the office @ (800) 339-4513 or email me at lamargodbey@citynet.net. ■
Elkins Wastewater Treatment Plant
Innovative Approach Doubles WWTP Capacity

With aging equipment and a limited treatment capacity, the Elkins Wastewater Treatment Plant in Elkins, WV was approaching the end of its useful life. State and federal regulations called for an increase in plant capacity, and the state’s Department of Environmental Protection (DEP) put a hold on business and residential growth until the plant could be expanded. Burgess & Niple (B&N) designed and implemented a cost-effective solution that doubled the facility’s treatment capacity and replaced dated equipment without increasing the footprint of the plant.

The Challenge
The design team’s primary challenge was to address state and federal regulations pertaining to the City’s combined sewers. Combined sewers, which convey stormwater and wastewater within a single piping system, are susceptible to overflows during wet weather periods. When overflows occur in the Elkins area, untreated wastewater is discharged to the nearby Tygart Valley River.

A planning study determined that the most cost-effective solution would be to increase the capacity of the existing treatment facility. This would reduce the frequency of combined sewer overflows and allow the plant to receive and treat wet weather flows.

The Solution
The B&N team designed a hybrid aeration and mixing system that doubled the plant’s treatment capacity from 2.5 to 5 million gallons per day (mgd) without increasing the size of the oxidation ditch tank. The facility’s hydraulic capacity was doubled from 5 to 10 mgd by using two old clarifiers for storm flow routing, upsizing yard piping, installing a new large-diameter clarifier, and expanding the ultraviolet light disinfection system.

The team also worked diligently to control costs for the client. “To reduce the cost of the expansion, we showed treatment plant employees how to perform some of the renovation work themselves,” said B&N project manager Sam Swanson. With B&N’s assistance, the plant staff installed a second aeration blower, air supply piping and bubble aeration diffusers all of which increase the oxidation ditch capacity. They also replaced three ineffective brush rotors with two modern-design units.

Costs also were controlled by maximizing the use of the existing facilities, all of which were renovated, expanded or upgraded. Two new structures – dewatered sludge storage and septage receiving/storage – were added to the plant site, but were included within the existing plant site footprint in order to preserve the adjacent recreational park.

The Results
Completed two months ahead of schedule, the City considers the $8.5-million project a success. “The upgrades have reduced the amount of untreated wastewater discharged into the Tygart Valley River,” Elkins Wastewater Treatment Plant Superintendent Mike Wolfe said. “With the upgrades in place, the plant can now support business and residential growth in our community.”

According to the state’s Department of Environmental Protection staff, the Elkins Wastewater Treatment Plant was so successful that it will be used as the model for minimizing stormwater overflows into sensitive receiving streams.

In October, 2008, the Elkins project received a Silver Award in the American Council of Engineering Companies of West Virginia’s Engineering Excellence Award Competition.

Source: B&Nfacets, Issue 1, 2009
America celebrates July 4 as Independence Day because it was on July 4, 1776, that members of the Second Continental Congress, meeting in Philadelphia, adopted the final draft of the Declaration of Independence. Following its adoption, the Declaration was read to the public in various American cities. Whenever they heard it, patriots erupted in cheers and celebrations. Bells were run, guns fired, candles lighted, and firecrackers set off.

Over time, various other summertime activities also came to be associated with the Fourth of July, including historical pageants, picnics, baseball games, watermelon-eating contests, and trips to the beach. Common foods include hot dogs, hamburgers, corn on the cob, apple pie, cole slaw, and sometimes clam bakes.

The Declaration of Independence itself has become one of the most admired and copied political documents of all time. It was written by Thomas Jefferson and revised by John Adams, Benjamin Franklin, and Jefferson. It is a justification of the American Revolution, citing grievances against King George III. It is also a landmark philosophical statement, drawing on the writings of philosophers John Locke and Jean Jacques Rousseau. It affirms that since all people are creatures of God, or nature, they have certain natural rights, or liberties, that cannot be violated.

John Adams wrote that the Fourth of July “…ought to be celebrated by pomp and parade, with shows, games, sports, guns, bells, bonfires, and illuminations from one end of this continent to the other…”
Northern Jackson County PSD  
Dewey Thomas Ridge  
Self Help Waterline Extension  
Notes & Highlights

Northern Jackson County PSD applied for a grant on August, 2007 for $115,000. Jeanna Bailes, Manager of the Project & Community Development, at the WV Development Office. Governor Manchin’s Small Cities Block Grant Commitment was received in May, 2008. This is the second grant to be awarded by the Governor.

Erin Thacker, Mid-Ohio Valley Regional Council has been very instrumental in preparation and submission of documentation with Jackson County Commission and with Jeanna Bailes. The District is under Jackson County Commission jurisdiction; therefore, the grant was obtained through the Jackson County Commission. Jim Hildreth, Boyles & Hildreth was the Engineer. The grant pays for materials, rental of equipment, and engineering fees. All labor must be provided by the community.

Residents must be low to moderate income to qualify. A Low Income Survey was conducted by Erin Thacker, Mid Ohio Valley Regional Council with 100% participation and the residents LMT being 80%. Neil Thomas, Sandyville, has served as the Project coordinator to represent the residents of Dewey Thomas Ridge. People in this area must haul their water. Due to the high geographical elevation, drilling wells for a water supply is expensive with low quantity or bad quality water. Many of us take for granted that we turn on the spigot and water is there for us. Residents will dig lines, lay pipe, attach tracer wire to pipe, clear right of ways, flagging of roadway traffic, seed & mulch, even fix lunch for those working on the line. All participants have to sign a waiver of li-
ability if they work on the line. Customers will be served from existing tank on Windy Ridge.

Project initially started when 7 residents petitioned for a self help project in 2002. At that time, the cost of materials was too high for residents to pay for themselves. An average of $11,000 per customer for materials was needed. District had a self help project in October, 2000 with 7 residents of Buck Run installing a 1 mile line. However, on this line, the residents only received pipe. They had to supply the equipment. Three more taps for customers have been added to this line.

Ironically, the two people who initially wanted the self help project were not part of the project. In 2002, Cheryl Henthorne started the idea of a self help project. However, the cost per customer was too high for the low income residents. Cheryl eventually lost hope for water and sold the property to Bill Mahley. Later, Dennis Hart was very supportive; however, he could not wait for the funds to become available from the grant and drilled a well. Construction started April 9, 2009. In 11 ½ work days, 10,000’ of 6” water main was installed by fathers, sons, brothers, farmers, friends, and neighbors. The last of the 6” line was laid on 4/25/09. Rock was a problem with solid limestone rock at Pleasant View Cemetery. Only 20” per day was hammered at this site. Over 2000 ft. of 2” line was laid in 4 days under rainy skies and mud.

Special thanks to the following workers:

Randal Angus – NJCPSD personnel
John Hickman – NJCPSD personnel
Scott Balser and Ralph – Balser Equip.
Don Wilkinson
Bob Sim
Neil Thomas
Doug Hess
Howard Hess
Scott Hess
Rob Hess
Matt Hess
Dustin Hess
Bill Mahley
Brian Hess
Bran
Don Hess
Benny Lucky
Derrick Cooper
Anita Cooper
Mike M.
Rick Anderson
Nolan Thomas
Bob Pursley
Mary Lou Pursley

NJCPSD personnel were on-site assisting with the installation each day. Don Wilkinson kept daily logs of how much pipe was laid, workers, equipment, and weather conditions. Bob Sims kept measurements of installed hydrants, test stations, valves, etc. An OUTSTANDING JOB was done by all!!!

Special thanks to the following:

Gov. Joe Manchin
Jeanna Bailes, Project & Community Development of WV Development Office
Jackson County Commissioners
Don Stephens
Joe Pitts
Tommy Nutter
The late James Waybright
Sandy Garrett
Fred Rader, MOVRC
Erin Thacker, MOVRC
Amy Harries, MOVRC
Jim Hildreth, Boyles & Hildreth
Cam Hildreth, Boyles & Hildreth
Mountaineer State Energy
Sidney Smith Trucking, Inc.
NJCPSD Personnel
Margie Flinn, Mgr.
Deb Smith, Admin. Asst.
Randal Angus, Maintenance
John Hickman, Maintenance
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John Lockhard, Secretary
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Charleston, WV 25362
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<table>
<thead>
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<th>Name</th>
<th>Address</th>
<th>Phone Number</th>
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<tbody>
<tr>
<td><strong>Analabs, Inc.</strong></td>
<td>P.O. Box 1235, Crab Orchard, WV 25827</td>
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<td><strong>REIC Consultants</strong></td>
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<td>(800) 999-0105</td>
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<td><strong>Reliance Laboratories, Inc.</strong></td>
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<td><strong>American AKV Company</strong></td>
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<td>(412) 851-1230</td>
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<td>(888) 542-8561</td>
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<td>(304) 986-3368</td>
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<td><strong>AMR, Inc.</strong></td>
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<td>(276) 928-1712</td>
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<tr>
<td><strong>Appalachian Software, Inc.</strong></td>
<td>44 Amber Way, Scott Depot, WV 25560</td>
<td>(304) 757-1260</td>
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<table>
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<tr>
<th>Name</th>
<th>Address</th>
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<tr>
<td><strong>Atlantic Machinery</strong></td>
<td>P.O. Box 3566, Chester, VA 23841</td>
<td>(804) 590-0100</td>
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<td><strong>American Leak Detection</strong></td>
<td>P.O. Box 709, Carnegie, PA 15106</td>
<td>(412) 279-1210</td>
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<tr>
<td><strong>American Cast Iron Pipe</strong></td>
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<tr>
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<td>(412) 851-1230</td>
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**Consulting**

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<tbody>
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<td><strong>Fred N. Bissell</strong></td>
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<td><strong>Hach Matt MacDonald</strong></td>
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<td><strong>H. D. Supply Waterworks, Dunbar</strong></td>
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<td>(304) 768-0686</td>
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<td><strong>H. D. Supply Waterworks, Martinsburg</strong></td>
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<td>(304) 263-6986</td>
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<tr>
<td><strong>High Tide Technologies, LLC.</strong></td>
<td>315 Tenth Ave. North, Nashville, TN 37203</td>
<td>(615) 236-6678</td>
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<tr>
<td><strong>Hydra-Stop</strong></td>
<td>104 Walnut St., Nitro, WV 25143</td>
<td>(708) 768-7654</td>
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<td><strong>Instrulogic Corporation</strong></td>
<td>P.O. Box 468, Round Hill, VA 20142</td>
<td>(540) 383-2222</td>
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<td><strong>ITT Water &amp; Wastewater USA</strong></td>
<td>P.O. Box 443, Wabash, IN 46992-0443</td>
<td>(260) 563-3171</td>
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<tr>
<td><strong>ITT Water &amp; Wastewater USA</strong></td>
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<td>(304) 986-3368</td>
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<td><strong>JCM Industries, Inc.</strong></td>
<td>P.O. Box 1220, Nash, TX 75569</td>
<td>(903) 832-2581</td>
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<tr>
<td><strong>Klear Water Management</strong></td>
<td>444 National Road, Wheeling, WV 26003</td>
<td>(304) 233-5330</td>
</tr>
<tr>
<td><strong>Learco Equipment</strong></td>
<td>P.O. Box 12730, Pittsburgh, PA 15241</td>
<td>(412) 221-4888</td>
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<td><strong>AMR, Inc.</strong></td>
<td>P.O. Box 234, Rocky Gap, VA 24366</td>
<td>(276) 928-1712</td>
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- See Our Ad Page 28
- See Our Ad Page 32
- See Our Ad Page 29
- See Our Ad Page 33
- See Our Ad Page 71
- See Our Ad Page 43
- See Our Ad Page 50
- See Our Ad Page 59
- See Our Ad Page 68
- See Our Ad Page 76
- See Our Ad Page 82
- See Our Ad Page 91
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Phone: (304) 204-1818
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*American Rubber Company
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Mansfield, TX 75063
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**A. Y. McDonald Mfg. Co.
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2323 Windham Road
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Phone: (304) 345-9599
See Our Ad Page 74

**Moody and Associates, Inc.
11548 Cotton Road
Meadville, PA 16335
Phone: (800) 836-5040
See Our Ad Page 27

**Mountaineer Computer Systems
P.O. Box 982
Lewisburg, WV 24901
Phone: (304) 392-5018
See Our Ad Page 78

*M.S. Jacobs & Associates, Inc.
1217 Ohio Ave.
Dubuque, IA 25064
Phone: (304) 343-8906
See Our Ad Page 38

*Mueller Company
4119 Whitford Circle #408
Glen Allen, VA 23060
Phone: (800) 527-0286
See Our Ad Page 18

**Natgun Corporation
3964 Brown Park Dr., Suite B
Hilliard, OH 43026
Phone: (614) 777-9868
See Our Ad Page 58

**National Road Utility Supply, Inc.
P.O. Box A
Valley Grove, WV 26060
Phone: (304) 547-0101
See Our Ad Page 18

*Neptune Technology Group
1600 Alabama Highway 229
Tallassee, AL 36078
Phone: (800) 243-0421
See Our Ad Page 52

*NOVA Rubber Company
134 7th Avenue
South Charleston, WV 25286
Phone: (304) 744-4658
See Our Ad Page 14

*Oldcastle Precast, Inc./Packaged Systems, Inc.
P.O. Box 13399
Sissonville, WV 25360
Phone: (304) 984-3333
See Our Ad Page 62

*Oreco Systems Inc.
814 Airway Avenue
Sutherlin, OR 97479
Phone: (800) 348-9843
See Our Ad Page 53

*Paragon Archeology, LLC
855 Opekiska Rd.
Fairmont, WV 26554
(304) 363-9315
See Our Ad Page 2

*Pittsburg Tank & Tower Co.
P.O. Box 913
Henderson, KY 42419
(270) 826-9000
See Our Ad Page 61

*John P. Place, Inc.
90 Clairton Boulevard
Pittsburgh, PA 15236
Phone: (304) 343-2607
See Our Ad Page 77

***Precision Pump & Valve
517 Old Goff Mt. Road
Cross Lanes, WV 25313
Phone: (304) 776-1710
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*Re-Ox, LLC
1216 N. 155th Street
Baton Rouge, LA 60007-0147
Phone: (913) 583-9916

*Reynolds, Inc.
6451 Germantown Road
Middletown, OH 45402
Phone: (513) 424-7287
See Our Ad Page 32

*Romac Industries
6106 Lansgate Road
Midlothian, VA 23112
Phone: (800) 258-7448
See Our Ad Page 77

***Service Pump & Supply Co.
4446 Waverly Road
Huntington, WV 25704
Phone: (304) 429-6736
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*Shafer, Troxell & Howe, Inc.
97 Monocacy Blvd.
Frederick, MD 21701
Phone: (301) 682-3390

*Sherwin Williams Industrial
220 Crosswinds Ct.
Huntington, WV 25704
Phone: (304) 748-8200
See Our Ad Page 48

*Southern Corrosion, Inc.
738 Thelma Rd.
Charleston, WV 25311
Phone: (304) 558-3612
See Our Ad Page 7

*State Equipment Inc.
P.O. Box 3939
Pittsburgh, PA 15236
90 Clairton Boulevard
Phone: (800) 245-2281
See Our Ad Page 51

*Vermeer of West Virginia
500 MacCorkle Avenue
Grantville, PA 25319
Phone: (304) 748-8200
See Our Ad Page 77

**Tepco Equipment Co., Inc.
P.O. Box 897
Mars, PA 16046
Phone: (724) 625-4260
See Our Ad Page 28

*Tenney Company
600 Commerce Dr., Suite 612
Moon Township, PA 15108
Phone: (412) 269-0100
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**Underwater Service, Ltd.
Rt. 1, Box 23-A
Poca, WV 25159
Phone: (304) 759-2515
See Our Ad Page 2

**United Laboratories
Rt. 2 Box 113
Montrose, WV 26283
Phone: (304) 478-3117
See Our Ad Page 77

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Gurnee, IL 60031-9005
Phone: (847) 791-7000
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**Utility Service & Supply, Inc.
P.O. Box 438
Monroe, OH 45054
Phone: (513) 539-7590
See Our Ad Page 37

**Utility Solutions, Inc.
527 Curtis St.
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Phone: (740) 369-4300
See Our Ad Page 51

*Valtronics, Inc.
P.O. Box 490
Ravenswood, WV 26164
Phone: (304) 273-5356
See Our Ad Page 48

**Walker Engine Power
112 Carriage Drive
Bellevue, WV 25015
Phone: (304) 949-1600

**Water Development Authority
100 Association Drive
South Charleston, WV 25313
Phone: (304) 765-4000
See Our Ad Page 7

**Waterton, Inc.
6106 Lansgate Road
Midlothian, VA 23112
Phone: (800) 258-7448
See Our Ad Page 77

**W.C. Weil Company
P.O. Box 7144
Charleston, WV 25339
Phone: (717) 469-0058
See Our Ad Page 7

**W.C. Weil Company
P.O. Box 490
Ravenswood, WV 26164
Phone: (304) 273-5356
See Our Ad Page 48

**Waterscape Precast
5090 MacCorkle Avenue
St. Albans, WV 25177
Phone: (304) 768-5965
See Our Ad Page 26

**Watek, Inc.
6 Hill Top Rd.
Belle, WV 25015
Phone: (304) 949-1600

**Water Development Authority
180 Association Drive
Charleston, WV 25313
Phone: (304) 588-3612
See Our Ad Page 28

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