

UTAH GROUND WATER ASSOCIATION

The Advocate

FALL 2012 EDITION

LETTER FROM THE PRESIDENT

DAVE WORWOOD — 4D PLUMBING

I hope The Utah Ground Water Association Board met this week and it was a bit depressing to hear all of the tragedies that have occurred over the past couple of months in our industry. We have had accidents and deaths in several of our member's families. You and your association have reached out with some financial aid in their time of need with funds from our Crisis Fund. That is money raised from our convention quilt raffle. When you purchase tickets remember that the money you spend goes for a good cause in times of need. Everyone stay safe, please!

This is as good a time as any to plug our convention in Mesquite this coming January. Every person and company in our industry should attend a convention and ours is as good as it gets for ground water. I can usually tell when I arrive at a job if the contractors doing the work have stayed informed and up to date, or if they are still doing the same things their grandpa taught them decades ago. As Dave Hansen says, "just cause my granddad who taught my dad who taught me did it this way, doesn't mean it is the correct way". Companies that stay up on training and the latest techniques and materials have a positive influence with the general public and it leaves a positive image of our industry. Our convention provides CEU's required for licensing and the education we receive is priceless. A great deal of what is presented is done so by industry professionals who are the top of their field. Where else can you get that kind of information? As an added bonus where can you go and have so many of your friends in one place?

The General Membership Meeting and Board Elections will be held at the Mesquite Convention. If you have issues you would like addressed or changed, I would encourage you to join your State leaders and run for a position on the Board. You can make a difference if you really want to and will participate. As we all know, the economy is not our best friend right now but we need to reach into our pockets and support the Utah Ground Water Association. With all of us as one voice we do have some clout when we need it.

(Continued on page 2)

INSIDE THIS ISSUE:

LETTER FROM THE PRESIDENT	1
WELL EFFICIENCY, SPECIFIC CAPACI- TY, AND WELL DEVELOPMENT	8
UGWA 2013 CONFERENCE & EXPO	4-7 16 17 19 23
IN MEMORY	11
NEWS FROM THE STATE ENGINEERS OFFICE	20
UGWA MEMBERSHIP APPLICATION	24
UGWA BOARD DIRECTORY	27



LETTER FROM THE PRESIDENT (CONTINUED)

(Continued from page 1)

This will be my last article as President of the UGWA. You will be electing some new Board members and some new officers at the convention in January. I am honored to be leaving the association in such good hands. The remaining Board and president-elect that I have had the pleasure of working with are more than capable and are excited to take the association ahead for the next two years. I recommend that you spend a little time to reflect and nominate some people to fill the openings who will assist in leading this association into the future and who will take us to the next level. Our association has some very well qualified people to do that if the members will step up and show their leadership skills. I do not know if I have had a positive effect during my term, but I can tell you that it has been a positive experience for me! I have met some of the nicest and most knowledgeable people in the world during my term in office. I have learned that some people I had thought were too high, or just plain stuffy, are actually wonderful people who may be just a little shy or maybe not as full of bull as some of the rest of us. I can truly say this has not only been a learning experience for me but a fulfilling one as well. To all those who have tutored and guided me through this endeavor I say thank you from the bottom of my heart. I have had help from past officers, regular members, vendors, manufacturer reps and many others during the past two years. What an opportunity to be able to interact with so many different individuals from so many walks of life.

Colette is an asset that cannot be overlooked. She has done some wonderful things for our association and has brought us into the modern day tech era. She communicates with all of us very well and has the ability to reach all of the members if they choose to let her via e-mail. She provides a continuity that makes everything run smoothly and I owe her big time.

Jim Goddard has my utmost respect. He can make us all laugh but at the same time he has to deal with all of us, at our best and at our worst, and he always does it with respect and professionalism. We are very fortunate to have him overseeing those of us in this industry.

I write this with some selfish sadness also. It seems that just as I meet new friends, some others are leaving the industry. Several reps I have met over the past couple of years are retiring. Congratulations to them but it is a loss to those of us that will miss them, their golf, and their jokes. Steve and Bill good luck in all you do.

If I could influence the membership, it would be to get involved with the UGWA. My dad always said "you only get out of anything what you put into it". Be it an ATM machine, your business or a relationship. That goes for your UGWA association as well, the more you get involved, the more satisfaction you will gain. With that said I want to say THANK YOU for the opportunity to serve as a Board member and in a leadership capacity. It truly has been a very positive experience! Support your new leadership and the association!

One final Thank You to the existing Board! Every one of them has made sacrifices in their lives to serve the UGWA. If I try to list their accomplishments I will forget some but trust me they have all contributed. Thanks George for correcting, editing, and creating our newsletters. They are great.

May God bless you & Thank You for all of the support!. Hope to see you in Mesquite.

GLOBAL DRILLING PRODUCTS

**RELIABILITY IS PRODUCTIVITY**

LEARN MORE ONLINE:
www.boartlongyear.com

RELIABLE AND INNOVATIVE SOLUTIONS FOR GROUND WATER APPLICATIONS

With many years of local and global experience, highly trained professionals and advanced drilling equipment and tooling, Boart Longyear offers unparalleled productivity within ground water services including the following.

- Reverse Air Exploration
- Track Mounted Exploration
- Casing Advance Systems
- Large Diameter Water Wells
- High Capacity Pump Tests
- Downhole Video Survey
- Wireline Core Drilling
- Directional Drilling
- Deep Flooded Reverse Exploration
- All Terrain Support Equipment
- Directional Rotary and Core Drilling
- Conventional Air & Mud Rotary
- Environmental Monitoring Wells
- Pump Installation and Removal
- Horizontal Drain Installation
- Well Rehabilitation & Repair

ASX:BL



2013 UGWA Conference & Expo

SCHEDULE OF EVENTS

CEU credit will be given to all registered attendees who attend classes

Wednesday, January 9th

6:00pm - 9:00pm **Vendor Setup** (closed to attendees)

Thursday, January 10th

9:00am - 11:45am **Vendor Registration & Setup** (closed to attendees)

9:00am - 12:00pm **Golf Tournament @ The CasaBlanca Golf Club**

12:00pm - 4:30pm **Registration & Vendor Display Open**

2:00pm - 2:15pm Welcome and Announcements

2:15pm - 3:15pm **CEU Class: Utah Well Rules, Issues and Updates**

presented by Jim Goddard, Utah Division of Water Rights

3:15pm - 4:45pm **CEU Class: Keeping the Pump Primed: Aquifer Sustainability**

presented by John Jansen PhD PG, The 2013 McEllhiney Lecturer

4:45pm - 6:15pm **Vendor Social** w/cash bar (everyone is welcome)

6:15pm - 9:00pm **Banquet & Scholarship Auction**

Friday, January 11th

7:00am - 8:00am **Vendor Visits**

8:00am - 9:00am **CEU Class: Hydro-Geologic Classification System for Water-Well Boreholes** *presented by Thom Hanna PG, Johnson Screens*

9:00am - 9:45am Break / **Vendor Visits**

9:45am - 11:00am **CEU Class: Hydro-Geologic Classification Lab**

presented by Thom Hanna PG & Chris DeKorver PG, Bowen &

Collins

11:00am - 12:00pm **General Membership Meeting & Board Elections**

12:00pm - 1:00pm Lunch

1:00pm - 2:30pm **CEU Class: DOT Safety & Inspection Protocols**

presented by Bruce Fox, UDOT Highway Patrol

2:30pm - 3:00pm Break / **Vendor Visits** / **Vendor Drawing**

3:00pm - 4:00pm **CEU Class: Geophysical Logging for Water Wells**

presented by Scott Hold, Century Geophysical

3:00pm - 4:00pm **Vendor Take Down**

4:00pm - 4:15pm Closing Remarks - Jason Lamb, UGWA President

4:15pm - 4:30pm Final Drawings / Convention Adjourned

At This Year's Conference & Expo.....

2013 McElhiney Lecture

Keeping the Pump Primed: Aquifer Sustainability

presented by **John Jansen PhD PG**

How will your groundwater resources fare in the future and how will that affect your business? How can we ensure the sustainability of our aquifers through sound science? How should groundwater contractors and scientists confront economic and political challenges affecting the resource that is pivotal to the success of their businesses? How is “sustainability” defined and what tools and strategies can be used to protect groundwater systems as well as those who obtain and develop it? What information must be gathered and compiled to build consensus and present a compelling case to regulators and policymakers?

By attending John Jansen's 2013 McElhiney Lecture presentation, you will gain an understanding of:

- How several different definitions of “sustainability” apply to the management of an aquifer, and how these different definitions may affect your business
- States' varying approaches to aquifer management, reflecting their local conditions and history with specific considerations of how the approach in your state affects you and your business
- How regulatory practices are evolving, and why they must balance local economic and political realities with environmental needs to be accepted and successful
- Meaningful ways that you provide information and build consensus, to help the regulatory evolution move in a positive direction
- Steps needed for successful management from all perspectives.



Currently, there are states that manage aquifers by pumping to balance groundwater recharge, which can cause stream depletion. Others limit pumping to protect surface flows, which can have negative economic impacts. Yet still others manage aquifers for controlled depletion in recognition of the severe economic disruption that would occur from either stricter goals or a lack of any planning and management. Many western states manage aquifers to protect surface water rights, while others ignore the connection between surface water and groundwater. Some eastern states seek the use of a hybrid “regulated riparian” approach to balance the free use of water with a reasonable use standard. What are the impacts of these approaches to your local groundwater industry and the reliability of water resources in the future?

No one can control, manage, or sustain what is not measured, so monitoring is the first step needed to ensure success. Monitoring can identify aquifers being used in an unsustainable manner and that information can be used to build information and consensus to find remedies to sustain groundwater systems as well as the industries and businesses that rely on them. One example of this is the deep sandstone aquifer of northern Illinois and southeastern Wisconsin, where decades of over pumping have created one of the largest cones of depression in the world. Both states have conducted detailed studies of the aquifer and have begun regional planning to control the human and environmental impacts. Other regional examples from around the country will be presented, and an emphasis will be given to our local conditions and issues. You won't want to miss this!

Attendee Registration Form

UGWA Annual Conference & Expo—January 10-11, 2013

CasaBlanca Resort & Casino in Mesquite NV

Registration includes: *Thursday Vendor Social; Thursday Banquet Dinner and Fundraising Auction; Friday Lunch; Exhibit Hall Access; Admission to All CEU Classes*

First: _____ M: _____ Last: _____

Certifications: _____ License # _____ Contractors # _____

Phone: _____ Email: _____

Company: _____

Address: _____

City: _____ State: _____ Zip: _____

**Received by
January 2, 2013**

Received After

Registration

UGAW Annual Membership	\$50	\$50	\$ _____
Conference Registration (attach additional employee names & email addresses)	\$125	\$175	\$ _____
Non-Member Registration	\$200	\$250	\$ _____
Non Displaying Vendor	\$300	\$350	
Golf Tournament (9 holes)	\$40	N/A	\$ _____

Spouse Meal Tickets (Those Not Attending Classes)

Banquet Dinner/Auction Only	\$35	\$45	\$ _____
All Three Meals	\$60	\$85	\$ _____

Raffle Tickets

Quilt Tickets	6 for \$5	Qty: _____	\$ _____
Gun Tickets	6 for \$10	Qty: _____	\$ _____
46+" HD TV Tickets	\$50	Qty: _____	\$ _____

TOTAL ENCLOSED: \$ _____

Return Completed Form with Your Payment to: UGWA 5577 Walden Glen Dr, Murray UT 84123-7942

or **Register On-Line** www.utahgroundwater.org

Questions: 801.541.7259 or admin@utahgroundwater.org

Vendor Registration Form

UGWA Annual Conference & Expo—January 10-11, 2013

CasaBlanca Resort & Casino in Mesquite NV

Registration includes: 10x10 Booth Space; 6' Table & Chairs; Promotion in our Quarterly Newsletter; Promotion on our Website www.utahgroundwater.org; 1 UGWA Membership; 2 of The Following: Thursday Vendor Social; Thursday Banquet Dinner and Fundraising Auction; Friday Lunch

Only 6 Left!

Company: _____

Address: _____

City: _____ State: _____ Zip: _____

Member

First: _____ M: _____ Last: _____

Phone: _____ Email: _____

2nd Representative

First: _____ M: _____ Last: _____

Phone: _____ Email: _____

Registration

Booth Space # _____ \$400 \$ _____

Golf Tournament \$40 \$ _____

Spouse or Additional Representative Meal Tickets

On or Before Jan 2nd After Jan 2nd

Banquet Dinner/Auction Only \$35 \$45 \$ _____

All Three Meals \$70 \$85 \$ _____

Raffle Tickets

Quilt Tickets 6 for \$5 Qty: _____ \$ _____

Gun Tickets 6 for \$10 Qty: _____ \$ _____

46+'' HD TV Tickets \$50 Qty: _____ \$ _____

TOTAL ENCLOSED: \$ _____

Return Completed Form with Your Payment to: UGWA 5577 Walden Glen Dr, Murray UT 84123-7942
or **Register On-Line** www.utahgroundwater.org

Questions: 801.541.7259 or admin@utahgroundwater.org

WELL EFFICIENCY, SPECIFIC CAPACITY, AND WELL DEVELOPMENT

KYLE WIDDISON CWD/PI, NRA INSTRUCTOR/LIFE MEMBER

Each well that we drill or do a work-over on has efficiency and a specific capacity. If we follow these numbers as a well ages, it can provide an additional revenue stream for each of us. On most domestic wells the specific capacity is, for the most part, not considered or worried too much about. This makes sense as really all we and the well owner are looking for is a well that will provide a reliable source of high quality water. 10 feet or 20 feet difference in the pumping and static water level makes a very small difference in the total pumping cost of the well.

If however you have a customer that has a well that would be considered a “public source” i.e., 15 connections or more, then this can become a real issue. Some of the largest municipal well owners will spend as much as \$1,000 per day just for the electricity to run one well. If you could improve the specific capacity of the well by 10-15% then you could save over \$100 per day just on the power costs alone.

It is an established fact that almost all wells will begin to deteriorate almost as soon as they are drilled. This is very hard to detect in small domestic wells and so today I will just discuss the effects on larger wells, wells that produce perhaps 300 gallon per minute (gpm) or more. The principles however are the same and these apply to domestic wells, irrigation wells, industrial wells and public supply wells.

I will illustrate this effect by a couple of case studies we were recently involved in. These wells were both redeveloped within the past year.

Case #1. This well was drilled in the 1960s via the Cable Tool drill and drive method. The well is configured as follows: well depth is 600 feet, casing size is 20-inches in diameter from 0 feet to 300 feet in depth, the casing is 16-inches in diameter from 300 feet to 600 feet, and the static water level was 280 feet in depth. The well was equipped with a 200 horsepower (HP) submersible pump set at 400 feet and produced 700 gpm. When the well was new in 1960, the specific capacity was as best we could tell around 100 gpm per foot (or in other words, it produced 1000 gpm with 10 feet of drawdown). The current specific capacity had dropped from this 100 to about 17 gpm per foot. The drawdown at 700 gpm was about 40 feet. This may sound normal or really not too bad but when you put the numbers to it, the specific capacity had dropped off by some 80%.



The project involved an attempt to return the well to its original specific capacity or at least as close as we could get to that. We have found over the years that once a well has lost more than 50% of its original capacity that it is nearly impossible to recover it. We pulled the pump, redeveloped the well, test pumped it and then reinstalled the owner's pump in the well. This is a simplified description of the process as we were on the well for about two months. We could tell during the process that we were making progress as we pumped low amounts of water from time to time from the

(Continued on page 12)

The Sign of Service



The Symbol of Quality

- Grouts•
- Drilling Fluids•
- Well Cleaning Chemicals•

Local Contacts:

Ron Peterson (801) 712.0939

Doug Keller (801) 349.7314

Baroid Industrial Drilling Products
Product Service Line, Halliburton

P.O. Box 1675 Houston, TX 77251

(877) 379.7412 or (281) 871.4613

www.baroididp.com

LOUGHLIN
FOUCHT

WATER ASSOCIATES ▲ LLC

435.649.4005

www.LoughlinWater.com



Jeffrey C. Stucki

Nickerson Company, Inc.

2301 West Indiana Avenue • P O Box 25425

Salt Lake City, Utah 84125

website: nicopumps.com

801-973-8888 Office

801-597-0139 Cell

801-973-8267 Fax

jeff@nicopumps.com

Van Bohne
Sales

INTERMOUNTAIN DRILLING SUPPLY



801.972.6455 phone

801.972.6372 fax

800.480.7715 watts

801.244.8114 cell

van@intermountaindrillingsupply.com

3412 West 2400 South

West Valley City, Utah 84119



Steve Price

Western Hydro Corporation

Outside Sales Representative

Office: (800) 421-4185

Mobile: (801)-330-5534

SPrice@westernhydro.com

2406 South 3270 West

Salt Lake City, UT 84119



Pumping Solutions:

- ✓ Drives & Panels
- ✓ Pumps & Turbines
- ✓ Water Systems & Conditioning
- ✓ Package Systems

WE DELIVER!



Distributor of top quality pumps, motors and controls. Committed to exceptional customer service and expert product knowledge. A proud member of the NGWA, AZWWA, UGWA, WSGWA, OGWA, IGWA & MWWDA.



Midvale, UT
800-733-6065
801-561-5011

Phoenix, AZ
800-962-9500
602-233-0441



Locations across
the West to better
serve you!

Visit Us Online
Mitchellewis.com

Obituaries

On behalf of the UGWA, we wish to express our sincerest condolences for the loss you have endured. Peace be with you always.

Kenneth Scott Wright

1941 ~ 2012

Nibley, UT-Kenneth Scott Wright 71, passed away peacefully at his home, surrounded by his family. Ken married Connie Wright and had two daughters, Christie (Kelly) Higbee and Kenna (Dewayne) Forsberg.

Ken worked for Lee Drilling, drilling water wells and started his own successful business, Wright Drilling in 1971.

A Memorial Service was held Saturday, October 13, 2012, at Serenicare Funeral Home, Providence. In lieu of flowers, the family asks donations be made to Four Paws or The Humane Society.



Karen Rae Pitkin Price

1959 ~ 2012

Karen Rae Pitkin Price, age 52, passed away September 6, 2012 in West Valley City, Utah.

Karen was born October 23, 1959 in Salt Lake City, Utah to Dale J. Pitkin and Nancy Emerson Pitkin. She graduated from Skyline High in 1977, and from the University of Utah in 1988 where she received her B.S. degree in Biology. She married Steven D. Price on October 4, 1984 in Salt Lake City, Utah. Karen loved all of her pets, she was an artist, she enjoyed photography and the

Golden Eagles Ice Hockey Team; where she enjoyed working with the team and watching their games. Most of all, she enjoyed the time she spent at the family cabin in Ouray, Colorado.

Karen is survived by her loving husband, Steven D. Price; siblings, James D. Pitkin, Susan K. Pitkin and Steven J. Pitkin. She is preceded in death by her parents and Uncle Robert Emerson.

No Services will be held. In lieu of flowers, please make a donation to "No More Homeless Pets of Utah", or "Best Friends Animal Shelter" in Kanab, Utah in Karen's memory.

Condolences may be sent to the family at www.valleyviewfuneral.com

WELL EFFICIENCY, SPECIFIC CAPACITY, AND WELL DEVELOPMENT (CONTINUED)

(Continued from page 8)

well. We could see even from these short-duration, low-flow tests that we had improved the well. As this progressed we could see that the improvement was dramatic.

At the conclusion of the project a large capacity pumping test was done. These are the results of the step and long term test:

Pumping rate (gpm)	Drawdown (feet)	Specific Capacity (gpm per foot)	Duration (hours)
1000	4.8	208	8
1500	8.1	185	8
2000	12.7	156	8
2500	17.5	142	8
2800	22.0	127	24

The results of this test were quite dramatic. We had more than doubled the specific capacity from the time the well was new. There are some very interesting things that occurred during the process. We noticed the presence of bentonite-type clay/mud still trapped in the formation even after 50 plus years. These samples of water sat on my desk for some two months undisturbed. Even after this amount of time the water was still cloudy. This indicates the presence of bentonite. I can only assume from this that the Cable Tool driller used this mud during the drilling process. I do know that it is/was a fairly common practice while drilling Cable Tool wells.

I recommended to the customer that they consider buying a new bowl assembly that would better match the new pumping conditions of this well. They declined due to budget constraints. In the end we reinstalled the existing pump back into the well and reconnected it to their system. A very interesting thing has happened. Even though this pump is no longer pumping in the “sweet spot” of the pump curve (it’s over to the right hand side) the well now produces 1150 gpm into the system with the exact same pump.

This little example is simple to understand. They now have 60% more water being produced into the system at the exact same pumping cost (remember that HP curves are mostly flat, so the horsepower demand is about the same). If they were to redesign the pump, which I think they will this next year, I calculate that they will be able to more than double the flow from the well with the same horsepower being used. In effect they got a new well at the cost of a simple rehab. It’s like a new 700-gpm well for free.

The cost benefit ratio for a project like this is very high. The payback to the owner for this project was figured to be about 1 year. This was a win-win for everyone involved. The owner was happy and received real value for the monies expended. The consulting engineer looked good and has secured additional contracts from

(Continued on page 14)

GAYLEN FARNSWORTH
Pump Department Manager

STEVE REGAN CO.

4215 So. 500 West • S.L.C., Utah 84123
Phone (801) 268-4494 • Res. 253-3520
Cell Phone (801) 243-6100

S.L.C. Store Toll Free 1-800-888-4545 Pump Dept. Toll Free 1-800-888-4343 S.L.C. FAX 1-801-268-4596

NICO

Scott D. Roberts

Nickerson Company, Inc.
2301 West Indiana Avenue • P.O. Box 25425
Salt Lake City, Utah 84125
website: nicopumps.com

801-973-8888 Office Ext 234
801-597-4686 Cell
801-973-8267 Fax
801-253-7161 Home
scott@nicopumps.com

GO PAPERLESS!

And Stay Up To Date With Everything Happening At Your UGWA!

It's Easy-Just Send Us an Email to
admin@utahgroundwater.org

We will Email Your Newsletter

Also Available On-Line
Renew/Become a UGWA Member
Register for Events
Become a UGWA Sponsor
Current & Past Newsletter Issues
Classifieds & Announcements
And Much More!

WWW.UTAHGROUNDWATER.ORG

SHAWN NORDHOFF
Sales Representative

**Industrial Piping
Products, Inc.**

2360 S. 3270 W.
Salt Lake City, UT 84119

801-973-7111
Fax 801-973-4791
Mobile 801-554-3928
Toll Free 800-748-5150

MB

Complete line of Drilling Products for:
Mining, Exploration, Waterwell, & Oilfield

MOAB BIT & TOOL CO.

24 Hr. Service 1-800-453-1052
FAX 435-259-2968
www.moabbt.com

MAIN OFFICE
435-259-7753
999 W. 400 N.
P.O. Box 817
Moab, UT 84532

STAN HOLLAND
Cell: 435-210-0817
stan@moabbt.com

WELL EFFICIENCY, SPECIFIC CAPACITY, AND WELL DEVELOPMENT (CONTINUED)

(Continued from page 12)

this, and the contractor (me) came out looking good. That is the best kind of job there is. Everyone involved wins.

Case #2. This well was drilled within the last 3 years. The well is configured as follows: drilled via the flooded reverse circulation method, casing size is 20-inch diameter, well depth is 800 feet, screens are set from 550 to 800 feet, static water level was 350 feet, and the pump was set at 500 feet. The pumping rate was 1,800 gpm with a specific capacity of 18 gpm per foot. This well had a huge sand problem. The specific capacity was about as good as the other wells in the area but the well bore had passed through a zone of what you would call flowing sand.

The first new pump that was installed in the well lasted 30 days, and the second one lasted about 40 days. We were asked if we could do anything to help. The gravel pack that was chosen was really too coarse and was allowing this fine sand and silt to flow into the well. We were tasked with trying to improve the well by reducing the sand and silt to below 5 parts per million (ppm) and perhaps improve the specific capacity by a few percent.



We did redevelop the well even though it had been airlift developed by the driller for some 300 hours. I make no negative remarks here about the driller as he did exactly as he was asked to and did so to the capacity of his equipment. We moved on the well and commenced the redevelopment. The first positive sign was that the well started to take additional gravel pack almost from the start. During the development process we installed some 350 cubic feet of additional gravel pack (the most we have ever added to an existing well is about 850 cubic feet). What this did was to fill the voids made from the sand we removed and served to thicken the filter pack in the well. On this well the volume of silt removed was about 200 cubic feet. If you look at it, we installed a larger volume than we removed by almost double. This was very good news.

The amount of sand we recorded as we developed reduced from about 2,000 ppm at the start to around 100 ppm at the completion. We did not test pump the well but the owner just reinstalled a new pump in the well at the end of our work. The result of this project was that when the pump started the owner still had to pump the well at a reduced rate for some time (which they could readily do because they had a VFD controller on the motor). I was really disappointed but over time they have been able to slowly ramp the motor up until they have nearly reached full speed and capacity. It has run non-stop for some 9 months now with acceptable results (< 5 ppm). As a side note the specific capacity also improved. It was not by a lot but it

(Continued on page 16)

**NOW IS THE TIME TO
PROMOTE YOUR BUSINESS**

**PROFESSIONAL DISCOUNT
PRINTING SERVICES**
from
Colette Read Associates

**Let Your Customers Know
You Are Still Going Strong !**

Business Cards · Flyers · Brochures · Letterhead
Envelopes · Inserts · Forms · Door Hangers
Posters · Hang Tags · Calendars · Pocket Folders
Bookmarks · Postcards · Direct Mail · And More!

UGWA Members: Get Additional 10% Off!

For Information and a Free Quote:
801.541.7259 · www.coletteread.com



DELCO WESTERN

SQFLEX PUMPS

WATER. WHENEVER, WHATEVER.

THE ORIGINAL.
THE TECHNICAL.
THE FLEXIBLE.

**PACO
PUMPS**



For Any Situation

SQ A New Standard In
Submersible Pumps

GRUNDFOS

www.delcowestern.com
2559 South 1935 West, Salt Lake City, Utah 84119

Phone (801) 972-0900
Toll Free 1-800-543-4319



Breaking Ground, Building Trust.



Tom Wardell
Regional Sales Manager

E-mail: twardell@schramminc.com

Direct Line: 317.774.1713
Mobile: 610.745.5966
Main Office: 610.696.2500
Fax: 610.696.6950

schramminc.com | 10358 AURORA COURT • FISHERS, IN 46038 USA

**ngwa
expo '12**

Las Vegas | Dec 4-7

www.GroundwaterExpo.com

800 551.7379 • 614 898.7791

**Join us as we head back
to Vegas this December!**

That's right... the NGWA Groundwater Expo and Annual Meeting is heading back to Las Vegas this year! Mark December 4-7 on your calendar today and plan to join your fellow groundwater industry professionals—both old friends and new acquaintances—for another stellar groundwater industry event.

Discover. Connect. GROW.

**national
groundwater
association**

WELL EFFICIENCY, SPECIFIC CAPACITY, AND WELL DEVELOPMENT (CONTINUED)

(Continued from page 14)

did improve. It has gone from 18 to about 19.5 gpm per foot. I consider this a success. Again it is a win-win deal. Everyone involved makes out better. The owner has a well he can use, and the engineer and I made a profit.

If you feel inclined to track the capacity of the wells you drill over time you may find an additional place for you to work. In slack times you can visit these customers and ask to do an evaluation of their well's capacity. Some of these customers will want their well redeveloped to restore the well to its original capacity. Each of us have owners that are willing to spend money for this type of work as they can see the benefits of having the well as efficient as possible. They also know that a well is like any other machine or structure, it needs maintenance from time to time.

As a reminder, specific capacity (SC) is calculated as follows: Pumping water level (PWL) minus the static water level (SWL) equals the drawdown (DD). Pumping rate (Q) in gpm divided by DD equals SC: $PWL - SWL = DD$, $Q/DD = SC$.

As cold weather approaches, please be careful. Do some equipment repairs and keep your fingers out of harm's way. Kyle Widdison

:



2nd Annual Golf Outing *at the* UGWA Conference & Expo

Join us Thursday, January 10, 2013 for 9 holes of golf, fun and prizes! Tee times begin at 8am, but space is limited!

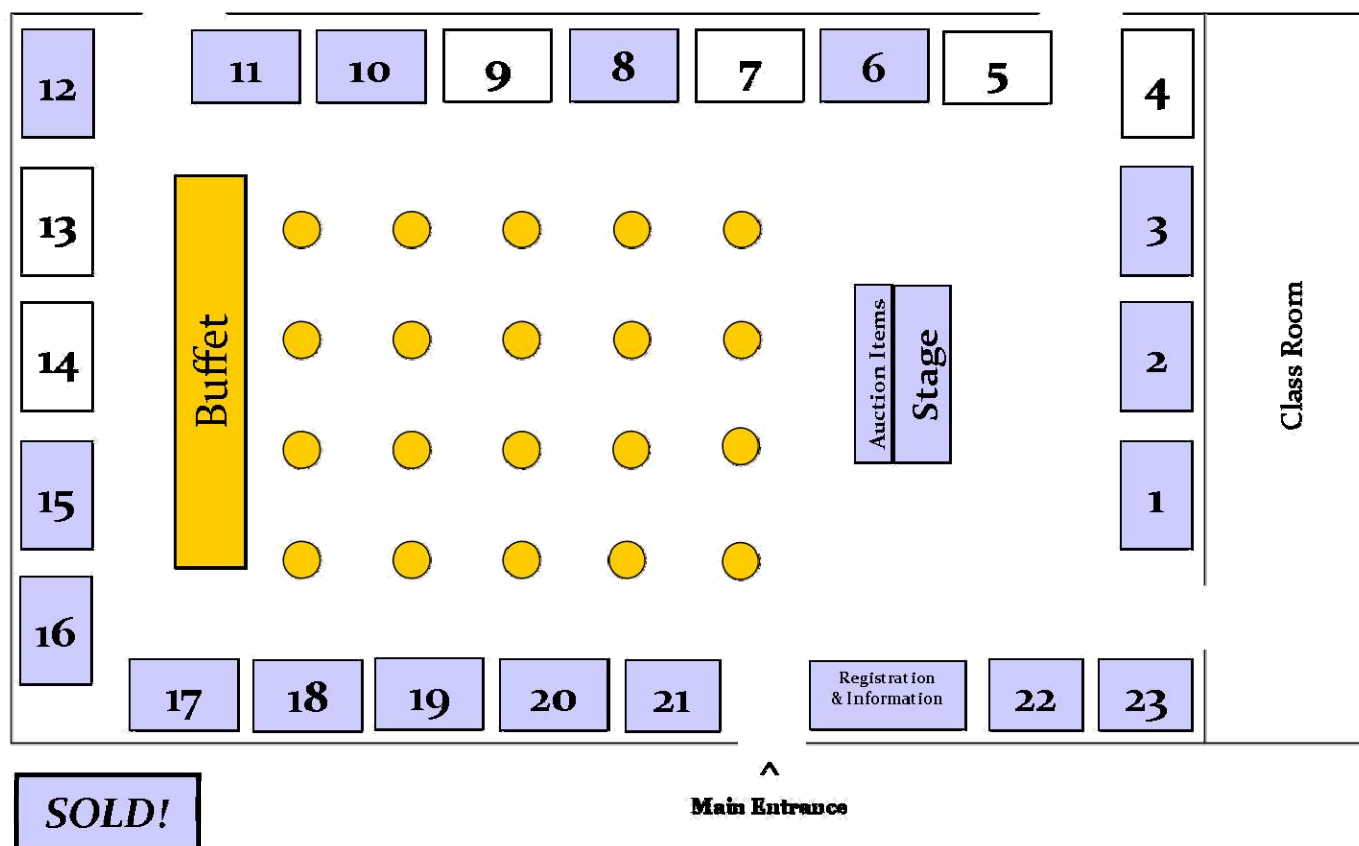
Signup is available with your Conference/Expo registration at www.utahgroundwater.org.

We Look Forward to Seeing You There!

***CasaBlanca Golf Club
1100 W Hafen Ln in Mesquite***

CasaBlanca Resort & Casino

Booth Size is 10x10 & includes a 6' table and chairs



\$29.98 Wednesday & Thursday ~ \$39.98 Friday & Saturday

Get your UGWA Membership FREE!

Simply tell your Friends, Co-Workers, Customers, Suppliers, Manufacturers and Colleagues about the benefits of being a member of your Utah Ground Water Association. When they join, we will credit \$10 towards your renewal, for each New Member referred by you. It only takes 5 and yours is free! It's that easy!

You only need to be a member in good standing and remind them to mention your name when asked how they heard about us. Applications are available thru our website at www.utahgroundwater.org or in this newsletter. If you have any questions, please feel free to contact us at 801.541.7259



Pumping Solutions:

- ✓ Drives & Panels
- ✓ Pumps & Turbines
- ✓ Package Systems
- ✓ Water Systems & Conditioning

WE DELIVER!



Distributor of top quality pumps, motors and controls. Committed to exceptional customer service and expert product knowledge. Proud member of the NGWA, AZWWA, UGWA, WSGWA, OGWA, IGWA & MWWDA.

Visit us at UGWA EXPO booth #16





Midvale, UT

800-733-6065

801-561-5011

Visit Us Online
Mitchellewis.com

Available from
our plants in:
California
Colorado
Texas



Colorado Silica Sand®

Ask for it by name!

Colorado Silica Sand® offers you the following features:

- Washed, cleaned and dried
- 90% to 99% quartz grains
- UC ≤ 2.5
- Well-rounded grains
- Precise sizing
- Meets AWWA A100 water well specification
- Meets AWWA B100 filtration specification
- NSF/UL Std-61 certified

For more information visit www.premiersilica.com.
salesinfo@premiersilica.com • 800-947-7263

Thank you for supporting
The Utah Groundwater Association



Please come visit us at booth # 1

DELCO WESTERN



**The Crisis Fund & Scholarship
Raffles Are Back!**

Get your tickets for a chance to win:

A Beautiful Quilt *proceeds benefit the UGWA Crisis Fund*

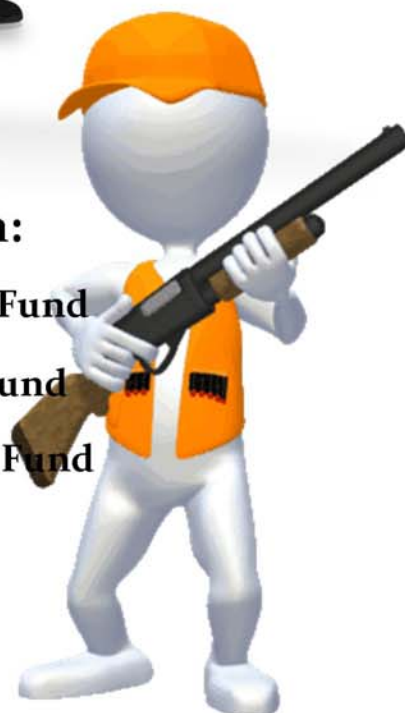
A Rifle *proceeds benefit the UGWA Scholarship Fund*

46+” HD TV *proceeds benefit the UGWA Scholarship Fund*

And Just for Visiting Our Vendors

A Free Drawing for a 22 Rifle

all drawings take place at the Conference



NEWS FROM THE STATE ENGINEER'S OFFICE

JIM GODDARD, PG—UTAH DIVISION OF WATER RIGHTS

Division of Water Rights Exempted from Historic Property Effects Evaluation

The Utah Division of Water Rights has secured an exemption from the State Historical Preservation Office (SHPO), so we no longer need to consider the effect of undertakings approved by the Division on historic property. Effective October 25, 2012, the Division will no longer require the completion of the "historic property evaluation form" for any Division application process including non-production well applications.

You may wish to understand the logic behind the exemption granted the state engineer from this state law. The exemption is authorized in statute under Section 9-8-404(1)(a)(ii) when SHPO has entered into an agreement with an agency. Water Rights successfully argued the Division's evaluation of historic property was in all cases redundant on federal lands and actions covered under federal permitting and a waste of state resources. Under the agreement, School and Institutional Trust Lands Administration (SITLA) will continue to perform their own evaluations and our involvement is once again redundant. Apparently SITLA was an agency instrumental in enacting the state law. Their intent was to have land management requirements similar to the federal statutes so there would be reciprocity as land swaps are considered. Since the state historic property statute applies to all state agencies the Division's consideration of historic property in application approval for those entities was also considered redundant. That left only private undertakings on private land. In the end, state history wisely chose not to use water right permitting as an opportunity to force private property owners to study historic property issues as a condition of a permit. Such studies if performed at the rigor SHPO prefers would cost several times the amount of the water right application.



"Service Sets Us Apart"

Call us any time, 24 hours a day, seven days a week for all of your pipe, valve, and fitting requirements. We are your one stop source for blank or perforated casing, drive shoes, well screen and pump column.

Industrial Piping Products, Inc.

2440 South 3270 West Salt Lake City, Utah 84119

(801) 973-7111 Toll Free (800) 748-5150 Fax (801) 973-4791



**Customer Service Specialists are here for all
of your water handling needs!**



Submersible Pumps

- 4", 6", 8" and Turbine
- 3 Turbine Build Facilities

Lorentz Solar Pumping Systems

VHS Pumps & Motors

Centrifugal Pumps

- Close Coupled
- SAE Drive
- Other Options

Sump, Effluent, and Sewage

Variable Frequency Drives

- Goulds Aquavar, Aquavar Solo & SPD
- Pentek Intellidrive
- Fuji

Steel and PVC Casing & Screen

Deep Set Pipe

- 1", 1-1/4", 1-1/2", 2"

All of your related Accessories!



Call Toll-Free at 1-800-421-4185!



Serving the Water Industry for over 30 years!



Western Hydro Corp. 2406 South 3270 West, West Valley City, UT 84119 1-800-421-4185



Need Help?

Colette Read Associates
are
Contracted Professionals

Bookkeeping/Accounting
Collections
Personal Assistance
Media Management: Social/Print/Web
And More!

All This Without Employee Headaches

For More Info: 801.541.7259 or www.coletteread.com



**Your presence on Capitol Hill
can make a difference!**

NGWA Washington Fly-in
February 25-26, 2013 • Washington, D.C.

Your knowledge and expertise about the groundwater resource and industry are needed to educate those who set the nation's policies—Congress.

And there's no better way to do so than in person.

Join us in Washington, D.C., in February 2013 for NGWA's 16th Annual Groundwater Industry Legislative Conference, also known simply as the NGWA Washington Fly-in, and make a difference.

PLEASE NOTE: REGISTRATION FOR THIS EVENT CLOSES JANUARY 25, 2013.

Sponsors:

BAKER
WATER SYSTEMS DIVISION
Campbell Monitor MODFLOW

PENTAIR MYERS • STA-RITE

national ground water association

800 551.7379 • www.NGWA.org/Flyin • 614 898.7791

THANK YOU

Our Sponsors & Vendors Are The Best
Support Those Who Support You!

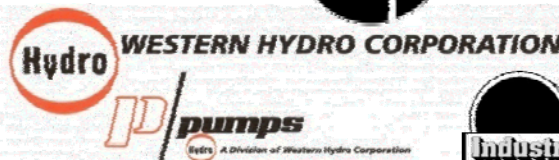
PLATINUM SPONSORS



GOLD SPONSOR



2013 Conference & Expo Exhibiting Vendors



Franklin Electric



RENEW or JOIN ON-LINE at WWW.UTAHGROUNDWATER.ORG or
MAIL THIS COMPLETED APPLICATION WITH YOUR PAYMENT of \$50 to:
UGWA 5577 Walden Glen Dr, Murray UT 84123-7942

MEMBERSHIP TYPE (CIRCLE ONE): A B C D E

DRILLING LICENSE # _____ **CONTRACTORS LICENSE #** _____

NAME _____

PROFESSIONAL DESIGNATIONS _____

COMPANY _____

MAILING ADDRESS _____

CITY/STATE/ZIP _____

PHONE (_____) _____ **CELL (_____)** _____

EMAIL _____

HOW DID YOU HEAR ABOUT

Membership Types

- A.CONTRACTOR:** Any person, firm or corporation doing business and licensed to drill, either water wells or ground water monitoring,
- B.PUMP INSTALLER:** Any person, firm or corporation doing business and licensed to install ground-water pumping equipment.
- C.MANUFACTURER:** Any person, firm or corporation engaged in the manufacturing of equipment, or materials used in the ground water industry.
- D.SUPPLIER:** Any person, firm or corporation engaged in the sale of equipment or supplies associated with the ground water industry.
- E.technical:** Any hydrologist, geologist, or engineer involved in teaching, research, consulting and or government services associated with the ground water industry.

This membership allows the joining of one individual to benefit from all the privileges of membership in the Utah Ground Water Association. Annual membership dues are \$50.00 per year. These dues cover membership only in the Utah Ground Water Association. The Utah Ground Water Association is affiliated with the National Ground Water Association and the Mountain States Ground Water Association.

UTAH GROUND WATER ASSOCIATION

ADVERTISING FEE SCHEDULE

NEWSLETTER (per quarterly issue)

DESCRIPTION	MEMBER	NON-MEMBER
1/8 Page or Business Card	\$25	\$30
1/4 Page	\$50	\$60
1/2 Page	\$75	\$90
Full Page	\$100	\$120

WEBSITE (per calendar month)

DESCRIPTION	MEMBER	NON-MEMBER
Classified (no pictures)	\$0	\$10
Classified w/one picture	\$5	\$15
Careers/Help Wanted	\$0	\$0
Bronze Sponsor	\$25 (with annual contract)	
Silver Sponsor	\$50 (with annual contract)	
Gold Sponsor	\$75 (with annual contract)	
Platinum Sponsor	\$100 (with annual contract)	

BRONZE LEVEL SPONSOR: One UGWA membership (\$50 value); One full color ad on the UGWA website, www.utahgroundwater.org with link to your website or email; One 1/8 page size/business card size ad in The Advocate, the UGWA's quarterly newsletter (\$100 value); Recognition at all UGWA events.

SILVER LEVEL SPONSOR: One UGWA membership (\$50 value); One full color ad on the UGWA website, www.utahgroundwater.org with link to your website or email & reoccurring HOME page placement; One 1/4 page size ad in The Advocate, the UGWA's quarterly newsletter (\$200 value); 10% discount at all UGWA events (\$40 off annual conference sponsor registration); Recognition at all UGWA events.

GOLD LEVEL SPONSOR: One UGWA membership (\$50 value); One full color ad on the UGWA website, www.utahgroundwater.org with link to your website or email, HOME & SPONSOR tab placements; One 1/2 page size ad in The Advocate, the UGWA's quarterly newsletter (\$300 value); 15% discount at all UGWA events (\$60 off annual conference sponsor registration); Recognition at all UGWA events.

PLATINUM LEVEL SPONSOR: Two UGWA memberships (\$100 value); Full color ad on the UGWA website, www.utahgroundwater.org with link to your website or email, Platinum all tabs placement; One full page size ad in The Advocate, the UGWA's quarterly newsletter (\$400 value); 25% discount at all UGWA events (\$100 off annual conference sponsor registration); Recognition at all UGWA events.

NOW ACCEPTING NOMINATIONS FOR YOUR 2013 BOARD OF DIRECTORS

Your Board of Directors have been working very hard to improve your Association and we invite to be a part of the team in 2013!

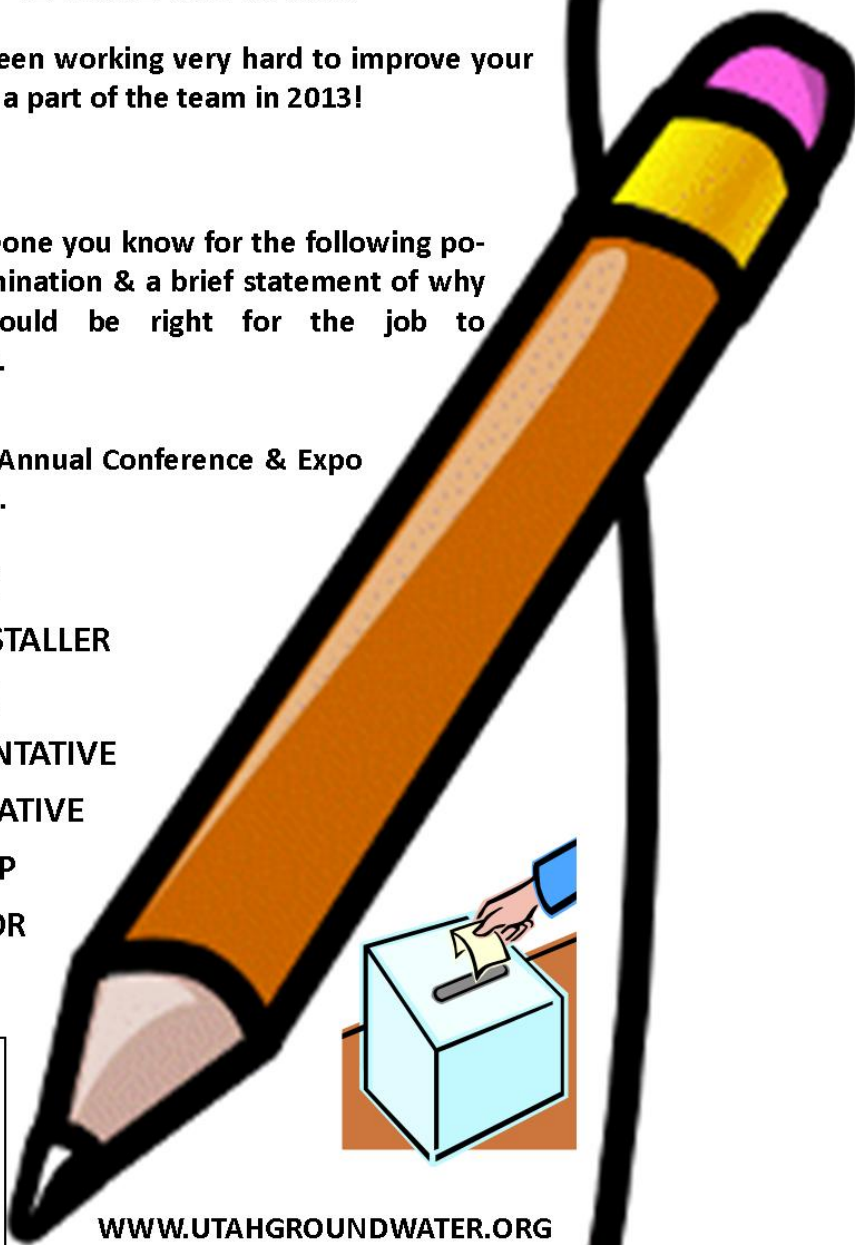
To nominate yourself or someone you know for the following positions please email your nomination & a brief statement of why you think this person would be right for the job to admin@utahgroundwater.org.

Voting will take place at the Annual Conference & Expo in Mesquite NV, January 11th.

**PRESIDENT-ELECT
CONTRACTOR/PUMP INSTALLER
REPRESENTATIVE
SUPPLIER/MFG REPRESENTATIVE
TECHNICAL REPRESENTATIVE
VP of MEMBERSHIP
NEWSLETTER EDITOR**

**For more information
please visit our website or
contact Colette Read at
801.541.7259**

WWW.UTAHGROUNDWATER.ORG



U

2012 Board

G

PRESIDENT David B Worwood 4D Plumbing

W

PAST-PRESIDENT Richard Petersen CWD CPI Aqua Design Inc

A

PRESIDENT-ELECT Jason Lamb Boart Longyear

MEMBERSHIP

James F Wankier
Mitchell Lewis & Staver

CONVENTIONS

Chris Mikell PG
Bowen Collins & Assoc

NEWSLETTER

George Condrat PG PE
Loughlin Water Assoc

MEMBERSHIP REPRESENTATIVES

CONTRATOR/PUMP INST

Robert Armstrong
Armstrong Drilling

TECHNICAL

Jerry Bronicel PG
Water-Tite Consulting

MFG/SUPPLIERS

Steve Price
Western Hydro

M Kyle Widdison CPI

Widdison Turbine Service

Chris Dekorver

Bowen Collins & Assoc

Shawn Nordhoff

Industrial Piping Products

DIRECTORS

David B Worwood

4D Plumbing

Richard Petersen CWD CPI

Aqua Design Inc

Randy Winegar

Mitchell Lewis & Staver

EXECUTIVE DIRECTOR

Colette C Read CBA

Utah Ground Water Association

STATE REPRESENTATIVE

Jim Goddard PG

Utah Division of Drinking Water

**2013 Annual
Conference & Expo
January 10th & 11th**



We Just Keep Getting Bigger & Better!

Vendor Booths Still Available:

www.utahgroundwater.org

UTAH GROUND WATER ASSOCIATION
5577 WALDEN GLEN DR MURRAY UT 84123-7942