



## Nevada Well Driller's Annual Newsletter June 2016

State of Nevada  
Division of Water  
Resources  
\*\*\*\*\*  
Service Since  
1903

### MESSAGE FROM JASON KING, STATE ENGINEER

“What do you call a guy with short term memory? Anything you want!” Please don’t let one “average” winter give you short term memory to the effects of the previous four drought years. Although *El Niño* came through for us this winter (and it could’ve been stronger!), another dry spell could be right around the corner. I hope all the prudent, water saving efforts that were used by you and your clients over the past four years aren’t forgotten. Those efforts are scalable and can be used in wet years as well. The Governor’s Drought Forum this past year highlighted examples, ideas and technologies that can be used to further Nevada’s drought resiliency. The Drought Forum also shined a light on several areas of our water law that may need to be modified.

Having a wet winter doesn’t in anyway slow down the operations here at DWR. We have been working with the Legislative Commission’s Subcommittee to Study Water, chaired by Senator *Goicoechea*, *on a number of water issues; we have been reviewing water related bill issues from the Drought Forum’s Final Report presented to the Governor; we are performing more field work than at any time I can remember in my 25+ years at the Division; and we are confronting difficult and controversial issues throughout the state.*

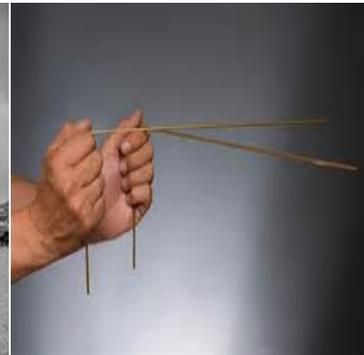
One example of such an issue is the conjunctive management of both surface and groundwater. Our office has contracted with USGS and DRI to build a *capture model* of the Humboldt River System. The *capture model* is the best available scientific tool we can use to understand the interconnection between groundwater pumping and its effects, if any, on the Humboldt River and senior decreed water users. In addition, we have ordered mandatory metering and self-reporting (with a few exceptions), of all groundwater withdrawals within the Humboldt River drainage. Our mantra is “you can’t manage what you can’t measure.” Our office will be working with the stakeholders along the Humboldt River, both surface and groundwater users, over the course of the next four years (that’s when the capture model will be finalized) to adopt a conjunctive management framework on how best to use the capture model results in managing and optimizing water usage in the basin.

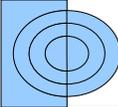
Finally, I believe there could be numerous Bill Draft Requests (BDR’s) related to water in the 2017 legislative session given all the water related activities over the past year. Stay tuned. As always, thanks for everything you do and I hope you have a great 2016 – and don’t have a short memory!

Best Regards,  
Jason King, P.E

### DOWSING FOR WATER

Originating in Germany in the early 1500s, dowsing is a type of divination employed in attempts to locate ground water, buried metals or ores, gemstones, oil, and many other objects and materials without the use of scientific apparatus. As pictured, the dowser walks the property and locates the water when the dowsing stick points down or the metal rods cross. Dowsing is considered a pseudoscience, and there is no scientific evidence that it is any more effective than random chance. Despite having no scientific basis, dowsing for water is a practice many people swear by to find water on their property. More common in the past, it is still used today by practitioners using everything from the old school hazel-wood sticks and willow branches to more modern L-shaped metal rods and electronics. Dowsing, also known as water witching, has had a recent surge as farmers in drought stricken California search for water, but most hydrogeologists equate it to relying on a palm reader or a mentalist—fun but not realistic.





**You can access the web for your carryover CEU's**

Just go to our website at [water.nv.gov](http://water.nv.gov), click on the "Programs" tab. Under the "Well Drillers" topic, click on the "2015 Carryover of Driller's CEU credits". Also available are upcoming courses/workshops under "Continuing Education Opportunity".

**CHECK OUT OUR WEB SITE**

**HTTP://WATER.NV.GOV**

and click on the "Programs" tab to view well driller program information

**Statewide Well Driller's Advisory Board Members**

Advisory Board Member's Name	License Number	Company	Location
Daniel Kohlman	2193	Boart Longyear	Elko, Nevada
Harlen (Andy) Andresen	1028	Andresen Exploration Drilling	Reno, Nevada
Steven Hamrick	1426	Great Basin Drilling	Pahrump, Nevada
Steven Loughry	1563	Allied Drilling	Winnemucca, Nevada
Manuel Quinones II	2272	Eagle Drilling Services	Las Vegas, Nevada

**Upcoming Well Drillers Exam Dates**

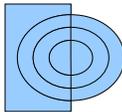
- May 24, 2016 – The Board meets in Carson City to conduct oral interviews (part III)
- May 25, 2016 – The Board meets in Las Vegas to conduct oral interviews (part III)
- June 23, 2016 – Written Examination parts I & II is given in Carson City, Elko and Las Vegas
- July 21, 2016 – Written Examination parts I & II is given in Carson City, Elko and Las Vegas
- August 23, 2016 – The Board meets in Carson City to conduct oral interviews (part III)
- August 24, 2016 – The Board meets in Las Vegas to conduct oral interviews (part III)
- September 22, 2016 – Written Examination parts I & II is given in Carson City, Elko and Las Vegas
- October 20, 2016 – Written Examination parts I & II is given in Carson City, Elko and Las Vegas
- November 15, 2016 – The Board meets in Carson City to conduct oral interviews (part III)
- November 16, 2016 – The Board meets in Las Vegas to conduct oral interviews (part III)
- December 15, 2016 – Written Examination parts I & II is given in Carson City, Elko and Las Vegas

The Well Drillers Exam consists of three parts:

- I.) A written examination to determine the applicant's knowledge of the State of Nevada's Regulations for Water Well and Related Drilling.
- II.) Identification of a well location on a USGS topographic map by Township, Range, Section and quarter-quarter.
- III.) An oral interview by the Statewide Well Driller's Advisory Board regarding the applicant's experience and knowledge of general drilling practices.

**Reminders of Specific Deadlines & Reporting Periods**

- Notice of Intent (NOI) shall be filed **three (3) working days** before the rig is set up. A copy of the NOI approval must be in the possession of the licensed driller at the work site.
- NOI is valid for **sixty (60) days** from date of filing. If a NOI expires, a new notice and fee must be filed and approved and the previous NOI must be referenced on the new card.
- A Well Driller's Report shall be filed within **thirty (30) days** after the well is completed.
- The Division requires a **24 hour notice** (phone call to a well supervisor) before plugging a well.



### Well Drillers Licensed in the State of Nevada

The Statewide Well Driller’s Advisory Board recommended to the State Engineer that licenses for 21 new well drillers be approved in 2015 (listed below). As of May 2016, there were a total of 363 licensed drillers by the State of Nevada.

License No.	Driller’s Name
2514	Robert Gallina
2515	Michael Hepworth
2516	David Tormoehlem
2517	Joshua Smith
2518	William Boyd
2519	Trenton Gibson
2520 LTD	Peggy Ogden-Kinsey
2521	Zakary Donnelly
2522	Richard Nelson
2523	Eddie Wright
2524 LTD	Steven Lara
2525 LTD	Sean Carrigan
2526	Ronald Longtine
2527	Rick Wilson
2528	Tommy Kinsey
2529	Mathew Staffel
2530	Keith Meyers
2531	Arnold Lamon
2532 LTD	Donald Davidson
2533	Dennis Chapman
2534	James Benninger

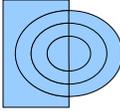


Schramm T450MIIA, top head drive, air rotary, mud rotary and DTH hammer drilling methods.



#### \*ANNOUNCEMENTS\*

- I want to thank Steve Loughry and Manuel “Q” Quinones II for accepting appointment to the Nevada State Well Driller’s Advisory Board. Their well drilling experience will be a great asset in evaluating future well drillers for licensing. I also want to thank existing Board Members Dan Kohlman, Andy Andresen and Steve Hamrick for their dedicated service.
- Senior Engineer Hamilton Reed retired from the well drilling section in the summer of 2015 and his knowledge and experience will be missed by the well drilling community that relied on his expertise.
- Well Supervisor Amanda Brownlee has also left the well drilling section, but she is far too young for retirement; rather, Amanda was promoted to a Water Resource Specialist in the Water Rights Section. Luckily for us, Amanda is always willing to help out the well drillers when we are short handed.
- Administrative Assistant Sue Gilbert has also left for a promotion; unfortunately for us it is with the Taxation Department, so she will not be available to assist with our program. We miss Sue and wish her the best.
- With the departures in 2015, the current personnel in the Carson City office are as follows: Ken Haffey is promoted to Hamilton’s position and will take over waivers, well drilling, and disciplinary issues. Shannon McDaniel has moved into Ken’s position and now runs the well driller testing and licensing program and CEU classes. The well supervisors are Jake Echeverria and Ryan Ransdell. Our new Administrative Assistant is Amanda Ciminski.



**Mining for Lithium with Deep Brine Wells**

Lithium has a wide variety of uses throughout the world. Lithium and its compounds are used in heat-resistant glass, lubricants, flux additives for iron, steel and aluminum production, and lithium batteries. Lithium is also used medically in the treatment of bi-polar disorder. With Tesla agreeing to build its giant battery manufacturing factory dubbed the ‘Gigafactory’ in Nevada east of Reno, a great deal of attention has turned to a key compound of those batteries; Lithium. Lithium is a highly reactive metal that is found in a compound form. In Nevada, Lithium is found by drilling production wells into brine water aquifers located generally in areas of alkali flats. In 2014, Nevada produced 9,430,641 pounds of Lithium compounds. This Lithium was mined by a single company, Rockwood Lithium (now Albemarle) near Silver Peak, Nevada. There are now a number of companies exploring in areas around the Rockwood claims, hoping to strike it rich in the anticipated Lithium boom. Pure Energy Minerals, Lithium X, Nevada Sunrise Gold, Ashburton Ventures, Nevada Alaska, and Cypress have all staked claims near Rockwood Lithium in Clayton Valley. Exploratory drilling for Lithium is being conducted at depths of up to 1,500 feet. The new companies are looking to new extraction methods, which do not involve large evaporation ponds. By using chemical extraction, any brine pumped to the surface will need to be re-injected using injection wells. The drilling of these new, deep wells and all associated drilling equipment and supplies bodes well for the entire well drilling industry operating in Nevada.

**Domestic Well Maintenance**

The National Ground Water Association encourages well owners to periodically get a water well system checkup that considers, among other things, whether the well system needs cleaning. Indications that a well needs maintenance includes: turbidity, decrease in well capacity, odor or taste problem, and a positive test for coliform or other bacteria. While periodic shock chlorination can provide a temporary fix, it can leave behind debris and organic material, which provide a food source for future bacterial growth. Thick encrustations can also protect bacteria by providing a barrier from the chlorine making the treatment less effective. If well maintenance (aka well rehabilitation) has been neglected, the best approach to a thorough well cleaning is a combination of chemical and mechanical methods. Mechanical processes for removing encrustation include the use of wire brushes or scrapers, agitation of water in the well including surging and jetting with pressurized air or water and using sonic waves. Chemical cleaning requires the use of various acids to loosen and dissolve debris. After treatment, all loose material should be flushed from the well and the entire well system should be disinfected. If bacterial contamination is a recurring problem, every effort should be made to find the source of contamination. Common issues include cracked or improperly placed sanitary seals, well casings at or below grade, a damaged or missing well cap or other top seal, holes in well casing, nearby septic tank failure, and proximity to farm animals. For additional information on water well testing, disinfection procedures and general information please see the Nevada Bureau of Safe Drinking Water webpage at <http://ndep.nv.gov/bsdw/wells.htm>.

**Contact Directory**

**Carson City Office  
775-684-2800**

Division of Water Resources  
901 South Stewart St., Suite 2002  
Carson City, Nevada 89701

**Southern Nevada Office  
702-486-2770**

Division of Water Resources  
400 Shadow Lane,  
Suite 201  
Las Vegas, Nevada 89106

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**Water Well & Drilling  
Questions**

*Carson City Office*  
Ken Haffey  
Shannon McDaniel  
Jake Echeverria  
Ryan Ransdell

*Southern Nevada Office*  
Tracy Geter  
Christi (Emery) Cooper

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**Drillers License,  
Exam  
and Continuing  
Education  
Questions**

*Carson City Office*  
Shannon McDaniel

*Southern Nevada Office*  
Tracy Geter

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**Other Useful Contacts**

Division  
of Environmental Protection  
Water Pollution Control  
Cliff Lawson (775) 687-9414  
**[ndep.nv.gov](http://ndep.nv.gov)**

**Nevada State Contractors Board**

Henderson Office  
(702) 486-1100

Reno Office  
(775) 688-1141