Water Lines

Water Lines is the resource newsletter and calendar of the Nevada Drinking Water and Wastewater Training Coalition.

Volume 22 Fall 2006 Issue

Inside this issue....

Spigot Q & A: 3

Regulatory Update.....3

New Board Members.....4

Featured System: Hacienda.....4

Safety Zone.....5

Las Vegas Springs Preserve....6

Training Calendar for 2006.....7

Spotlight on: Southern Nevada

Water Lines is funded by the Nevada Division of Environmental Protection

Editor, Brent Farr, P.E.

Editor, and Production, Joe Beard Jr.

Featured Operator: Kevin Snodgrass

By Bob Foerster, NvRWA

Kevin Snodgrass is the Public Works Director for the Fallon Paiute Shoshone Tribe. The water system spans thirteen miles from a neighborhood near Fallon to Stillwater. Wastewater collection systems, with two lift stations and aeration pond treatment – evaporative pond disposal, serve two subdivisions in the Stillwater area. Others are on individual septic, or connected to the Fallon municipal system. Snodgrass, along with two employees, Arlen Baca and Cody Downs covers a lot of the valley.

Kevin Snodgrass of the Fallon Paiute Shoshone Tribe

When Kevin came to the system in 2002, it was served by wells without treatment. An arsenic treatment facility was commissioned in January, 2005. He had worked at the water and wastewater systems in Gabbs for over twelve years, and before that was in gold mining operations near Austin.

Kevin graduated from Simi Valley High School in California. He earned a Distribution Operator Grade 2, and more recently, a Treatment 1 Certification from the Intertribal Council of Arizona. State certification is encouraged, but voluntary for operators of tribal systems.

With Kevin in the leadership role, the transition to arsenic treatment has gone smoothly. He has met the challenges of starting a new facility without direct experience at operating. Many Nevada systems will have arsenic treatment installed in the next few years. To get an idea of the level of difficulty, let's have a look at the processes.

Two wells, both located in the plant yard, are used alternately to supply water at 320 gpm summer / 220 gpm winter. The raw water arsenic concentration is in the range of 120 micrograms per liter, and must be reduced consistently by the treatment process to less than 10 micrograms per liter. The pH of the raw water is 9.2. The process is liquid phase iron adsorption, followed by membrane filtration. As water enters the building, carbon dioxide is injected to decrease the pH to approximately 6.5, and ferric chloride ($FeCl_3$) is added. Arsenic adsorbs efficiently to iron at this pH. As in conventional filtration processes, the iron is in a coagulated state and easily captured by filtration. The Pall brand membrane filters have a pore size of 0.1 micron. Filtered water flows

(Continued on page 2)

Featured Operator: Kevin Snodgrass *(Continued from page 1)*

to an air stripping tank where CO_2 is physically removed, increasing the pH to 8.0, a point where the water is non-corrosive. Product water is then chlorinated to maintain a free available residual chlorine concentration of 0.6 to 1.1 mg/L, and pumps equipped with variable frequency drives (VFD) move it to the distribution system.

The fifteen filters, each module containing 538 square feet of filter area, are backwashed automatically every twenty minutes. Backwash water is pumped to a clarifier which is outfitted with lamella plates. Solids are pumped from the clarifier to sludge bins for dewatering and drying. Supernatant is returned to mix with well water at the beginning of the treatment train. Water draining from the dewatering bins flows to municipal sewers. The automated membrane system performs a pressure-drop integrity test every fifty-five hours of run time. Further membrane filter maintenance includes manual Clean In Place (CIP), which is carried out every three months or whenever differential pressure (transmembrane pressure) reaches 30 psi. The three-hour CIP procedure includes addition of citric and hydrochloric acids, soaking and rinsing.

The treatment process can achieve arsenic concentrations down to non-detect levels, but is now run to target seven micrograms per liter, meeting the MCL with a thirty percent safety margin. As well as saving on chemical costs and membrane loading, the difference in sludge quantities is nearly fifty percent, as the ferric dose can be maintained around eight ppm, as opposed to fifteen ppm for complete removal.

Finished water is pumped directly to the distribution system, which includes a two hundred fifty thousand gallon concrete storage tank on nearby Rattlesnake Hill. Water then gravity flows from the Rattlesnake tank to the Stillwater area, filling a one hundred twenty-five thousand gallon elevated storage tank. The system currently has a total of three hundred thirty connections, and capacity for ninety-nine additional residential connections.

Carbon Dioxide Storage at Fallon

System connections are not metered, and summer demand can easily exceed plant production. Having experienced approximately five breaks yearly, the asbestos-concrete portions of the system are slated for replacement; this upcoming project may include metering. The Rattlesnake Hill tank, built in 1980, was recently cleaned, and a felt-backed, rubberized liner was installed.

The dewatered sludge, containing arsenic strongly adsorbed to the iron, is dried for one or two months (depending on season), then hauled to a landfill. Addition of polymer was discontinued when it was found to clog felt bin liners, and not needed for solids separation. Felt liners are discarded with the sludge. The $1.55 million arsenic facilities were designed by CH2M Hill, with funding from EPA and Indian Health Services, and project administration by IHS. Treatment added a cost **per thousand gallons** of $0.701 in 2005.

As part of the arsenic treatment upgrades, SCADA was added to the system. The wells and arsenic plant operate when the Rattlesnake tank reaches low level, and stop when the tank is filled. The SCADA system enables the monitoring of system conditions, and the operator can dial up or view screens from remote computers. This all helps where the operation is covered 24/7 by a staff of three. Remarkably, Kevin and crew also help other departments with their projects.

Snodgrass has met the small and large challenges starting up and learning the facility. All of this, except hypochlorination was new, and even that is a different setup. There was a lot to take in, from chemical handling to maintenance to disposal. The plant takes more attention than originally projected, and the work group stations itself at the plant.

Kevin's future challenges include, of course the pipe replacement and looping work, and continuing to improve the process. Lessons learned from this facility will be applied at the upcoming arsenic removal project at Schurz on the Walker River Paiute Reservation.

The Spigot Q & A: Focus on Electrical Fundamentals

Q 1. Resistance is measured in:

a. Direct current
b. Ohms
c. Amperage
d. Valence shell

Q 2. In circuits, E represents:

a. Resistance
b. Voltage
c. Execute
d. Induction

Q 3. Three-phase motors:

a. Cost less than comparable single-phase motors
b. Require less maintenance than single phase motors
c. Will easily start a heavy load.
d. All of the above

Q 4. Transformers are used to:

a. Diffuse electrical current
b. Equalize voltage flow
c. Step up or step down voltage
d. Measure the flow of current

Q 5. The device that stores electrical charges is a/an:

a. Capacitor
b. Inductor
c. Transformer
d. Float switch

Crystel Montecinos, Consultant, Tigren Inc., prepares The Spigot.

Study Material: Arasmith, S., Electrical Fundamentals for Water and Wastewater, ACR Publications, 1997

Answers to Spigot
1.B; 2.B; 3.D; 4.C; 5.A

NDEP - Regulatory Update

By Dana B. Pennington , NDEP

The Safe Drinking Water Public Water Supervision Program was moved to the Nevada Division of Environmental Protection in August of 2005. It is now called the Bureau of Safe Drinking Water. The Division Administrator, Leo Drozdoff and Deputy Administrator, Tom Porta have provided the guidance to incorporate the program into the structure of the Division. The program has adjusted well to the change under the leadership of Bureau Chief Doug Zimmerman and has "settled in" and is comfortable at NDEP. Responsibility for adoption of regulations, approval of variances and exemptions, and hearings for appeals now resides with the State Environmental Commission.

The Bureau has been busy since the move. **Regulations for Operator Certification and Water Quality/ Groundwater Treatment**, temporarily adopted by the State Board of Health, were permanently adopted by the State Environmental Commission. These regulations **became effective on October 31, 2005**. These regulations adopted the revised arsenic rule, the revised radionuclide rule, the filter backwash rule, the enhanced surface water treatment rule, the variance and exemption rules and revisions to the lead and copper rule. Primacy package drafts for the arsenic rule and variances and exemptions rule have been submitted to the U. S. EPA Region IX office for review. The remaining primacy drafts will be submitted this year.

The Bureau has received and processed sixty-three public water system **arsenic exemption** requests from a total of seventy-seven arsenic impacted systems. Exemption requests must meet specific criteria before the Division can recommend approval to the Commission. Thirty-six requests met requirements and will be presented by the Division to the State Environmental Commission on September 6, 2006. It is anticipated that the Commission will grant approval of the exemptions for these water systems. The remaining twenty-seven applications, when completed, will be presented to the Commission for approval at a later date. Fourteen of the arsenic exemption eligible systems have not contacted the Division. The ability to apply for an exemption will expire on January 23, 2009.

Many public water systems will receive notices from the Bureau concerning **lead and copper monitoring** this year. Large water systems (>3300 persons served) are not eligible for nine year monitoring frequencies and must monitor at three year intervals. Small systems that are eligible for a nine year monitoring frequency must also meet 90th percentile lead levels of five parts per billion. If not, the three year monitoring frequency is required. Rising population levels within some water systems also require more samples to be collected. The Bureau will contact your system and establish your specific monitoring requirements.

Monitoring for the **Revised Radionuclide Rule** was implemented in 2005 and is in the second year of the three-year monitoring period. Several public water systems have encountered elevated levels of uranium. These systems have initiated corrective actions to comply with the maximum contaminant level of 30 micrograms per liter. There are presently two water systems operating uranium treatment plants in Nevada.

The Groundwater Rule should be promulgated in August 2006. It will primarily impact systems experiencing coliform maximum contaminant level problems, but will also dictate how systems must disinfect. **The Radon Rule** has disappeared but may resurface in the next year or two. The Bureau will cover these rules in subsequent issues of Water Lines. Please check the Bureau website (some portions under development) at www.ndep.nv.gov for more information.

Nevada Training Coalition Elects New Board Members

By Joe Beard Jr., Farr West Engineering

At the March meeting of the NTC Board, two new Board members were elected. These Board members will fill the openings created when the size of the Board changed from five to seven members.

The NTC Board decided to increase their size, in part, to be better able to address waste water issues. The new members both have experience in the waste water side of the industry.

Chet Auckly

Chet Auckly is Director of Water Quality and Environmental Affairs for the California Water Service Company, and President of S.E.E. Company, LLC.

He has over 30 years experience as an Analytical/Biochemist, Microbiologist, Water Quality Manager, Researcher, Trainer/Educator, and Water Treatment Problem Solver.

Chet is a Registered Environmental Health Specialist in California and a Certified Grade IV Water Treatment Operator in Nevada.

He holds an A.A. (Physical Science/ Math), B.S. (Biology/Chemistry), M.S. (Environmental Engineering), and is currently pursuing a Masters in Business Administration (Expected completion 2008).

Other Post Graduate Studies include: Advanced Drinking Water and Water Reclamation Treatment Processes, Leadership Training, Financial Practices, Advanced Budget Planning, and Environmental Chemistry.

Chet has both published and/or presented over 30 technical papers in the Water/Water Reclamation Field.

He is the recipient of the George A. Elliott Memorial and the George Warren Fuller Memorial Awards of Excellence in the Water Field (California-Nevada Section American Water Works Association (AWWA) and International AWWA, respectively).

He is Past Chair of the California – Nevada Section AWWA. Chet is a recent past member of the Board of Directors, Past Chair of the Conference Management Committee, and Past Member of the Administrative and Policy Council of the International AWWA.

Stephen Long

Stephen Long was born in Sumter, South Carolina in 1962. Stephen was married in 1983, and has four daughters

Featured System: Hacienda Hotel and Casino

By Joe Beard Jr., Farr West Engineering

If you are in southern Nevada, and interested in lake-view gaming, you may end up at the Hacienda Hotel and Casino. Located on U.S. Highway 93 between Boulder City and Hoover Dam, the resort overlooks beautiful Lake Mead.

The Hacienda attracts locals, tourists who are recreating at Lake Mead, and other area visitors. With over 200 rooms, the hotel can generate considerable amounts of wastewater, which is treated on site.

WWTP at the Hacienda Hotel and Casino

With average daily flows of approximately 50,000 gallons, this small waste water treatment plant is busy every day of the year. The Operators manage this activated-sludge process plant to provide safe and economical waste water treatment for the resort.

The process starts at any one of the drains in the resort's many guest rooms, kitchens, or mechanical rooms. From there, the wastewater travels across the street to the WWTP, for collection in the headworks. It then passes through two aeration basins, a clarifier, and a chlorine contact chamber before being discharged.

When it comes to discharge of the treated effluent, the Operators at have several choices. One creative solution that they have come up with is the use of effluent for dust control. Through the use of a pumper-truck, the Hacienda has been using treated effluent for dust control on nearby construction projects for many years.

Also at their disposal are three rapid infiltration basins (RIBs). The Hacienda is permitted to discharge up to 85,000gpd through their RIBs. The system is checked through the use of three monitoring wells. Another unique feature of the RIBs is their accessibility to wildlife. Because the basins are not fenced-off, local groups of Big Horn Sheep, coyotes, duck and quail have taken to making frequent water-stops there.

The crew at the Hacienda consists of one Manager, one Operator, and one technician. Steve Cottrell has T-4 certification, and manages several area WWTPs, including the Hacienda. Jacob Wawers is the day-to-day Operator, and he has T-1 certification. In addition, he has a D-1 certification, and has Pool Operators Licenses from both the National body and Clark County Health Department. Jacob is currently studying for the T-2 exam. A technician helps round out the crew, making sure that operations are monitored seven days a week.

Nevada Training Coalition Electes New Board Members

(Continued from page4)

and one grandson. Since 1983, he has worked in five waste water treatment plants in three states.

He started in Texas, at Gulf Coast Waste Disposal Authority, where he filled an entry-level Operator position and fell in love with the field. He acquired a Texas "B" Wastewater Treatment License and worked his way up to Operator II. There, he would also fill in as Chief Operator when needed. His time in Texas lasted almost two years.

From Texas, Stephen and his family moved to Orem, Utah in July of 1995. There, he worked at a temporary position at the Central Valley Water Reclamation Facility as an entry level operator. Stephen worked at C.V.W.R.F. for about nine months.

Then, Stephen went to work for the City of Orem, at their 10 MGD WWTP. While working for the City of Orem, he worked his way up to Senior Plant Operator and Maintenance Manager. He acquired Grade IV Licenses in Treatment and Collection, and started on a degree path at Utah Valley State College for Environmental Science Degrees.

In 1997, Stephen received the Utah WEF Operator of the Year Award for Facilities Over 5 MGD. Later, Stephen also ran a 75,000 GPD package wastewater plant for the Siratoga Springs Community. Stephen served there for about 18 months.

Finally, the Longs moved to the Reno area in November of 2002. Stephen relocated in order to become the Facility Supervisor for the City of Reno-Stead Water Reclamation Facility. Since moving to the area, Stephen has acquired a Grade IV Water Treatment License. He has also received the Nevada WEF William D. Hatfield Award for Performance and Professionalism.

Stephen is a member of NWEA and the AWWA. His hobbies include cars, street-bikes, and off-roading.

Safety Zone: Safe Operation of Utility Vehicles

By Stevan Palmer, Rural Community Assistance Corp.

Did you know the number one cause of fatalities in the nation, both on and off the job, is traffic accidents? Most utility workers need to operate motor vehicles to perform their jobs, ranging from small trucks or passenger cars to Class A vehicles. Regardless of what type of vehicle you operate for work, there are many simple, "common sense" things you can do to prevent accidents.

Vehicle condition

Regularly inspect any vehicle you operate. Check the fluid levels, including brake fluid, windshield washer fluid, and power steering fluid. Test the turn signals, brake lights, instruments, horn, windshield wipers, brakes and other devices to make sure they are working properly. Before you get in a service vehicle, do a quick "walk-around" and visually check for worn, damaged or under-inflated tires, leaking fluids, or any other visible damage. Make sure any needed repairs are done in a timely manner.

Aggressive driving

Many accidents can be avoided by not being in too much of a hurry. Keep within the posted speed limit. Make sure you stop completely at traffic lights and stop signs. Yield the right of way. Be courteous to other drivers. Avoid following other vehicles too closely by observing the "two second" rule. Select a fixed object on the road ahead such as a sign, tree or overpass. When the vehicle ahead of you passes the object, count "one-thousand-one, one-thousand-two". You should not reach the object before you count to one-thousand-two. If you do, you are following too closely. Most rear-end collisions are caused by the vehicle in back following too closely.

Changing road conditions

It will take much longer to safely stop your vehicle if the road is wet or has or snow or ice on the surface. If enough water is standing on the roadway, your vehicle can "hydroplane", and lose control. Under these conditions, slow down and increase your following time behind other vehicles to a four or five second count. Avoid sudden changes in speed, and don't ride the brakes. If you do slide, steer in the direction of the skid and slow down until you resume control.

Be prepared to reduce your speed when you encounter high winds or poor visibility conditions like rain/sleet or fog. If you can't avoid driving in poor visibility conditions, drive slowly with your headlights on the dim setting.

Safety policies

Many companies have vehicle safety policies in place that prohibit activities such as eating while driving or talking on cell phones, or require walk-around vehicle inspections, etc. Be aware of your company's safety policies, and follow them. Be an active participant in your safety program. Look for ways to improve safety practices, and make suggestions at safety meetings. By contributing to your safety program, you will be protecting your employer, yourself, and your future.

Las Vegas Springs Preserve

By Joe Beard Jr., Farr West Engineering

The following material was derived from the Springs Preserve website at www.springspreserve.org.

The Springs Preserve is one hundred and eighty acres of historic land located west of downtown Las Vegas. Visitors will be invited to unravel five thousand years of local history and explore future possibilities through a series of museums, gardens, trails, restored structures and more when the site opens in 2007. The Preserve is located near the U. S. Highway 95 and I-15 interchange.

With engaging, state-of-the-art facilities and forward-thinking sustainable living exhibits, the Springs Preserve will offer unique attractions to appeal to every visitor's interest; including gardening, sustainability, desert living, and even archaeology.

A desert wetland, called a Cienega, is being created at the Preserve. Springs Preserve biologists have been working to create a grassy wetland that resembles the original springs, which dried up in the late 1960s. The wetland will provide visitors with a glimpse of the old Las Vegas, and the lush oasis that inspired Spanish explorers to name the valley "The Meadows," Las Vegas in Spanish.

The Springs Preserve is employing sustainability concepts by using environmentally-friendly, energy efficient straw bales in the construction of the Desert Living Center. Displays at the center will demonstrate methods to protect the desert environment without compromising the quality of life. The center will be just one of many features that will make the Springs Preserve an attractive destination when it opens in 2007.

The website invites guests to "Enter the Visitor Center and become immersed in Las Vegas cultural history." The Visitor center is home to the Big Springs Theater, where panoramic films prepare visitors for the Springs Preserve experience. Film topics range from the pre-history of the valley to the possibilities for the future. Also featured is the Natural Mojave Gallery, where the geological and biological history of the Las Vegas valley and the Mojave Desert are explained.

Also within the Visitor Center, visitors will find the City at a Crossroads Gallery. Here, the idea of a desert metropolis is examined in detail. Exhibit-goers can learn about the vast resources and technology required to sustain a city in the desert, and consider how Las Vegas might prepare for the future.

Finally, visitors are offered a wide selection of interpretive trails to follow at the Preserve. The Crossroads Trail passes the reconstructed Big Springs Springhouse, which was built to keep people and animals out of the spring, and protect the water supply. *(Continued on page 7)*

New Nevada Operators Certified

These operators passed water certification exams for distribution and treatment grades 1, 2, 3 and 4. Congratulations to all !

Distribution grades 1, 2, 3 and 4

D-1: Baker, Steve; Besserer, Ronald; Bodenstein, Barbara; Cozzens, Phil; Gaddy, Dennis; Hauck, Bill; Hynes, Leland; Kay III, James; Kline II, Robert; Lozano, Joseph; Moran, Michael; Mortensen, Shane; Murphy, Michael; Sinclair, Sean; Thomas, Kevin; Wawers, Jacob

D-2: Allen, Raymond; Blazzard, Barry; Brown, Joseph; Burak, Henry; Estep, Brian; Farris, Doug; Gates, Timothy; Gieszl, Karl; Higgins, Daniel; Hiler, Michael; Johnson, Timothy; Knowlton, Ralph; Lauby, Richard; Patrick, George; Rosso, Bob; Scheffler, Joseph; Stewart, Vern; Tookey, Mark; Woolery, Ed

D-3: Bates, Greg; Cole, Erin; Delisle, Maurice; Erickson, Chris; Fridy, Michael; Hulett, John; Johnson, David; Martin, Larry; McIntyre II, Neal; McKinney, Dana; Melton, Chris; Mills, Richard; Neill, James; Onorato, Robert; Sautter, Eric

D-4: Byrom, Jack; Struffert, Chris

Treatment grades 1 and 3

T-1: Baughman, Joseph; Dagel, Shannon; Delisle, Maurice; Golliher, Terry; Haupt, Larry; Margetts, Scott; Mills, Richard; Moore, Chad; Murphy, Michael; Payne, Scott; Quilici, Eugene; Welch, Dean; Youngblood, James

T-3: Murphy, Michael

Training Calendar for 2006

2006

September 5, 6, 7 - Fallon- NvRWA T1/T2 Operator Certification Training, 18 hr. course, Fallon Water Treatment Plant, 1401 New River Parkway. See www.nvrwa.org for information.

September 5,6,7,8 - Reno - AWWA Distribution and Treatment Exam Refreshers. Call CA-NV-AWWA at 909/481-7200 for Info.

September 11, 12 - Laughlin- NvRWA Fall Two-Day Training Event. Topics include Submersible and centrifugal pumps; Well construction, maintenance and repair; and Arsenic technologies. See www.nvrwa.org for information.

September 13 - State Water Certification Exam. Check NDEP/ BSDW Website for more information.

September 15 - Northern Nevada - AWWA Certification Exams for BF/XCCS. Call CA-NV-AWWA at 909/481-7200 for Info.

September 15 - Nevada Training Coalition Meeting.

September 22- UNR Videoconference- Fire Hydrants. Info: Crystel Montecinos at 775/240-1396.

October 10, 11, 12 - Tonapah- NvRWA Training, T1/T2 Operator Certification Review. See www.nvrwa.org for information.

October 14 - Northern Nevada - AWWA Certification Exams for BF/XCCS. Call CA-NV-AWWA at 909/481-7200 for Info.

October 17 - Dayton- NvRWA Training, CSUS/OWP Small Water System Video Series. See www.nvrwa.org for information.

October 19 - Gardnerville Ranchos- NvRWA Training, CSUS/ OWP Small Water System Video Series. See www.nvrwa.org for information.

October 20- UNR Videoconference- General Water Chemistry. Info: Crystel Montecinos at 775/240-1396.

October 24 - Eureka- NvRWA Training, CSUS/OWP Small Water System Video Series. See www.nvrwa.org for information.

October 26 - Lovelock- NvRWA Training, CSUS/OWP Small Water System Video Series. See www.nvrwa.org for information.

November 3 - Southern Nevada - AWWA Certification Exams for BF/XCCS. Call CA-NV-AWWA at 909/481-7200 for Info.

November 15 - Southern Nevada - AWWA Education Extravaganza. Call CA-NV-AWWA at 909/481-7200 for Info.

November 16- UNR Videoconference- Update of State and Federal Regulations. Info: Crystel Montecinos at 775/240-1396.

December 4, 5, 6, 7 - Reno - AWWA Distribution and Treatment Exam Refreshers. Call CA-NV-AWWA at 909/481-7200 for Info.

December 8- Nevada Training Coalition Meeting.

December 8 - UNR Videoconference- Review for Drinking Water Exam. Info: Crystel Montecinos at 775/240-1396.

December 12 - Southern Nevada - AWWA Certification Exams for BF/XCCS. Call CA-NV-AWWA at 909/481-7200 for Info.

December 13 - State of Nevada DHS Testing.

University of Nevada, Reno
Colleges of Agriculture, Biotechnology and Natural Resources & Cooperative Extension
2005 Videoconference Training Calendar: *www.unce.unr.edu/swp.wkshps.htm*

UNR videoconference classes for water system operators and managers are available in most communities. To request a workshop in your area, call Crystel Montecinos at 775/240-1396 or e-mail: xtelle@aol.com.

Community College of Southern Nevada
Wastewater & Water Technology Program
Info: LeAnna Risso, 702/434-6600 ext. 6418.

WWET Training in Clark County
Training for water treatment plant and distribution system operators, wastewater treatment plant and collection system operators, and other professionals working within these fields. Info: Jeff Butler 702/258-3296; see *www.wwet.org* for a current training calendar.

State of Nevada Water Certification Exams
All exams will be proctored on the date listed. Applications are due to the state (Steve Brockway) 45 days before exam dates. A proctor will contact examinees to schedule testing. Contact Debra Kaye at 775/834-8114 for information about 2006 exam dates.

Wastewater Certification Board Testing

Wastewater certification exams are given in quarterly.

Info: 775/465-2045 or *www.nvwea.org.*

This symbol designates Nevada Division of Environmental Protection pre-approved training for contact hours. Other training may be eligible for contact hours but is not yet pre-approved. Before attending any training, contact NDEP at 775/687-9527 for approval. Ten hours of approved training equals 1 CEU. A different ratio applies for safety training.

Las Vegas Springs Preserve

(Continued from page 6)

The Cienega Trail offers the opportunity to immerse yourself in the sights and sounds of wildlife. Enjoy the revived wetlands and take advantage of bird viewing opportunities. The Springs Trail offers an archaeological journey into the past, analyzing historical structures and remnants of the people who survived at the springs.

Also offered is The Exploration Trail, where guests are encouraged to imagine the Las Vegas of John C. Fremont, Mormon missionaries and early Native Americans. Learn about early water quality efforts at the Little Springs Springhouse, see the effects of overusing groundwater, and compare the water distribution methods of the 1920s to modern technology.

Nevada Drinking Water and Wastewater Training Coalition

American Water Works Association California/Nevada Section
www.ca-nv-awwa.org
Nicole Schreuder, Education Mgr., 909/291-2101

Indian Health Service
Dominic Wolf, 775/784-5327

NDEP **~~Bureau of Water Pollution Control~~**
http://ndep.nv.gov/bwpc/bwpc01.htm
Adele Basham, DWSRF, 775/687-9488
Michelle Stamates, AB 198 Water Grant Program, 775/687-9331
Nevan Kane, Wellhead Protection, 775/687-9426

Nevada Rural Water Association
www.nvrwa.org
775/841-4222
Bob Foerster, Executive Director
John Allred
Curtis Duff
Teresa Taylor
Jonn Scovil
Andy Andersen
David Willard

Public Utilities Commission of Nevada
www.puc.state.nv.us
Steve McGoff, P.E., Water Engineer 775/684-6140
Mark Clarkson, P.E., Senior Engineering Analyst, 775/684-6132

Bureau of Safe Drinking Water
http://ndep.nv.gov/bsdw/index.htm
775/687-9520
Jim Balderson, SWAP, 687-9517
Steve Brockway, CEU approval, 687-9527
Dana Pennington, 687-9516
Bert Bellows, arsenic, 687-9525

Nevada Water Environment Association
www.nvwea.org
775/465-2045
Starlin Jones, 775/861-4104
Eric Leveque, 702/792-3711

Rural Community Assistance Corporation
www.rcac.org
775/323-8882
Stevan Palmer

U.S. Environmental Protection Agency, Region 9
www.epa.gov/region09
Marvin Young, 415/972-3561

USDA Rural Development
www.usda.gov/rus/water/index.htm
Cheryl Couch, 775/887-1222, ext. 22
Kay Vernatter, 775/887-1222 ext. 28

University of Nevada, Reno Dept. of Civil Engineering
Dean Adams, 775/784-1474

Tigren, Inc.
Crystel Montecinos, 775/240-1396

UNR Natural Resources and Environmental Science and Cooperative Extension
www.unce.unr.edu/swp
Mark Walker, 775/784-1938

NDEP Board for Financing Water Projects
http://ndep.nv.gov/bffwp/index.htm

Water/Wastewater Education and Training Consortium of Southern Nevada — WWET
www.wwet.org
Jeff Butler, 702/258-3296

Farr West Engineering
Brent Farr, P.E. 775/851-4788

2006 NTC Board Members

Bob Foerster, Chair
nvrwa@pyramid.net

Dean Adams
vdadams@unr.nevada.edu

Cameron McKay
rhgid@aol.com

Don Allen
ssmwc@aol.com

Mark Walker
mwalker@unr.edu

Chet Auckly
cauckly@calwater.com

Stephen Long
longs@ci.reno.nv.us

Articles in Water Lines *may be reprinted with permission from Farr West . Reprinted articles must include the acknowledgement that the article originally appeared in* Water Lines, *the newsletter of the Nevada Drinking Water and Wastewater Training Coalition. For permission, call 775/851-4788.*

Farr West Engineering

5442 Longley Lane, Suite B

Reno, NV 89511

PRSRT STD
US POSTAGE
PAID
PERMIT #625
RENO, NV

This issue of *Water Lines* is printed on recycled and recyclable paper.