

Water Lines



Featured Article:

Careers in the Water and Wastewater Industry Career Recognition – Operators of the Year

By: Bob Foerster, NvRWA

Our industry, like most of the trades, is seeing a generation retire while younger workers look to other opportunities. As part of an effort to get people interested in these good, steady and interesting jobs, I would like to introduce the Nevada Rural Water Association's "Operators of the Year" for 2011. The awards are given each year at our annual conference in recognition of outstanding service provided by individuals to their local communities. Jobs in the wastewater and drinking water industry are service work, and also technical, scientific, customer-based and 'green' jobs. We protect both public health and the environment every day. Here are short bios on the "Operator of the Year" winners.

"Wastewater Operator of the Year" goes to Ron Jenkins of Ely. Ron has been with the utility less than a decade and has gained the education and certification needed to grow with the job. He was a presenter at the conference, sharing his experience of modifying the plant to control nitrate concentration in the effluent. Ron entered the wastewater industry at the City of Ely Wastewater Treatment Plant (WWTP) in April, 2003 as the assistant Operator. Prior to this, he worked for 14 years in the mining industry as a process/ Mill operator. Upon entering the wastewater industry, Ron found that the mining background was very similar to this industry. Pumps, flows, tank levels and PLC (programmable logic controller)

operation came very natural. Immediately, he began studying Wastewater treatment through the CSU Sacramento 'Ken Kerry' self-study course the summer of 2003. Ron also took several preparation classes from Curtis Duff, Technical Assistance Provider with Nevada Rural Water Association. In March of 2004 he sat for the Grade 1 exam and passed. By September of 2005 he was ready for the Grade 2 and passed. In March of 2008 Ron passed the Grade 3 Wastewater Treatment Plant Operator exam. Ron gives a lot of credit to Curtis and his training. The former Operator of the Ely plant retired in June of 2008 and Ron was promoted as the Operator in responsible charge. Since then, he has been certified in Water Distribution, Grade D-2. Most recently, Ron Jenkins was promoted to City of Ely Utilities Superintendent, over both wastewater collection and treatment and water production and distribution operations. By studying on his own, and using the resources available, Ron has achieved a successful career in the industry.

Representing Kingsbury General Improvement District is "Water Operator of the Year," Eric Johnson. An operator who has come up through the ranks, Eric is now supervising in a system where the challenges this year include a meter replacement project. He started as a seasonal road laborer in May of 1996, and

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worked at that each summer until 2000. In the Spring of 2000 Eric was hired as a seasonal water crew member and in August 2000 he was offered a fulltime position with the water system. A high school graduate, Eric has a variety of work experience, with the majority in the construction industry, then working as a mechanic, and switching to the ski industry for a long time, which is what brought him to Tahoe. In the drinking water industry, Eric has been a Seasonal Road Laborer, Seasonal Water Laborer, Water Operator, and now, Operations Supervisor. He has also studied on his own over the course of his career, and now holds certifications as a Grade 3 Water Distribution Operator and a Grade 3 Water Treatment Operator. The Kingsbury system has a 4 MGD (million gallons per day) ozone treatment plant

running under filtration avoidance, 25 to 30 miles of distribution pipe, and about the same of sewer collection system. Eric writes: *“I worked a bit with the water crew my first summer and thought it seemed like a very interesting line of work so I studied and passed my D-1 and T-1 pretty much on my own. The most challenging part of working in a small District as we move to upgrade the infrastructure is dealing with the limited, and at times contradictory, written records of the existing system. I learned most of what I know about it from working with Art Webb (now retired, and still on speed dial on my phone). The many pressure zones we have complicate things, as does the aging distribution system. I like the variety of working in a small system. In one day you can go from being in the mud in a hole fixing a leak in the morning to calibrating sensitive electronics at the treatment plant.”*

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We want people to think about joining our industry. There are careers in the industry covering almost all areas of interest, from office work and management to IT and electronics, to equipment operators and everything in between. Jobs in cities, and jobs in small towns. Jobs with on-the-job-training, and jobs where college is needed. If you are interested in seeing what the opportunities are, please contact any of the members of the Nevada Water and Wastewater Training Coalition / Certified Operators Forum, or any of the other contacts listed in *Water Lines*. We will be happy to talk with you about our industry. Outreach meetings can also be arranged, along with career days and possibly, job shadowing or summer internships at your local wastewater or water system.

WANTED!



High school graduates (or GED holders) for careers as WATER and WASTEWATER SYSTEM OPERATORS

Do you . . .

Enjoy working outdoors? Like the idea of a wide choice in where you might ultimately work (Nevada, other states, urban or rural locations)? Want to enter a career field predicted to **GROW** by 35% in the next 5 years?

Are you . . .

Self-motivated? Capable of working independently? Good with your hands? Interested in protecting our most precious resource **AND** providing one of the most important public services:

Clean, safe drinking WATER!

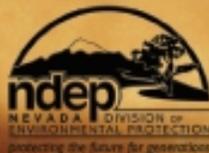
The State of Nevada's Bureau of Safe Drinking Water, Nevada Rural Water Association and Nevada Water Environment Association want to promote awareness of entry level water/wastewater operator training and career opportunities for young men and women across rural Nevada.

For more information, please contact:

Kelly McGowan, Operator Certification
NDEP, Bureau of Safe Drinking Water
775-687-9527; kmcgowan@ndep.nv.gov

Bob Foerster, Executive Director
Nevada Rural Water Association
775-841-4222; nvrwa@pyramid.net

Jennifer McMartin, Asst. Prog. Administrator
Nevada Water Environment Association
775-465-2045; jenniferm@nvwea.org



The Spigot Q & A:

Focus on Maintenance & Repairs



- When tightening any bolted fitting (ex. Flanged, MJ, Bolted Coupling) it is best to use a(n) _____ pattern?
A) Circular B) Up/Down C) Side to Side D) Diametrical / Criss-cross
- When operating any compression style dry barrel fire hydrant it is always best to:
A) Open hydrant all the way B) Only open as far as needed C) Use a pipe wrench to open
B) D) None of the above
- What is the formula to figure out the number of turns it takes to open a Gate valve?
A) Depends on the Manufacturer B) All valves are the same, 33 turns
C) The size of the valve times 3 plus a couple of turns D) Depends on the size of the valve key
- What is an acceptable way to repair a cracked/broken water pipe?
A) Full circle repair clamp B) Two Bolted couplings & a piece of pipe C) Standard repair clamp
D) All of the above E) None of the above
- When working on a compression style dry barrel fire hydrant you can fix/replace 95% of the parts while it is still buried.
A) True B) False
- Which type of products require lubrication on rubber surfaces?
A) Service Saddles B) Full Circle Repair Clamps C) Couplings D) Tapping Saddles
E) PO or MJ Fittings F) Any rubber product under compression
G) None of the above. Lube is only used to push pipe together
- Polyethylene CTS tubing and Type K copper have the same outside diameter.
A) True B) False
- Polyethylene IPS pipe and IPS PVC/Steel pipe have the same outside diameter.
A) True B) False



Answers to the Spigot questions

1) D 2) A 3) C 4) D 5) A 6) F 7) A 8) B

Many thanks to Pak Hughes of Western Nevada Supply Company. Material based on training classes provided by Mueller Co. and Western Nevada Supply Co.

***The Spigot is prepared by Crystel Montecinos, Environmental Consultant for Tigren, Inc.
You can contact her at 775-240-1396.**



Battle Mountain WWTP, taken by NvRWA Staff



Minden Gardnerville Sanitation District CWSRF Stimulus project, taken by NDEP Staff

Energy Management

By: John Hulett, Washoe County

Water and wastewater utilities wishing to reduce their operating costs may find savings in time of use (TOU) electrical rates offered by energy utilities. Time of use rates have been designed by energy utilities to encourage customers to shift their energy demands from periods of “peak” energy demand to periods of “off-peak” energy demand. Shifting energy loads daily from peak to off-peak times allows energy utilities to maximize capacity of their existing distribution and transmission facilities. Energy utilities incentivize the shift by providing customers with reduced electrical demand and commodity rates. Integration of TOU rates into your operation, accompanied by strategic use of energy may yield significant savings in operating costs.

Electrical utilities have structured TOU energy rates to encourage electrical use during off peak hours. Typically, off-peak hours occur late at night and early in the morning; peak demand typically occurs in the early afternoon and evening. Incentives are in the form of reduced electrical rates for demand (kilowatts – kW) and commodity charges (kilowatt hours - kWh).

Demand Charge (kW) – Energy charge incurred when you start a motor. Charge is based on maximum demand for power occurring during billing cycle.

Commodity Charge (kWh) – Total energy charges incurred over entire billing cycle.

The TOU rate structure provides savings to systems which have the ability to reduce their energy demand during on-peak times each day. This may not apply to all energy users,

this may require some analysis of your facilities and water demands before making the switch. TOU tends to favor systems which have gravity storage and can be optimized when experiencing seasonal swings in water demand. Systems with hydropneumatic storage or frequent motor stop/start may have difficulty shifting their energy demand and may not realize TOU savings.

In order to take advantage of the time of use energy rate, operators must have a control system that restricts energy use during peak times of the day. In most cases, this is accomplished through the use of a supervisory control and data acquisition system (SCADA). SCADA systems typically control motor stops/starts and can be upgraded for TOU control with as little as a programming change and a site visit by a SCADA integrator. When adding TOU controls to a SCADA system, utilities must ensure that there will be no adverse effects to customers or compliance limits. The control system should have the ability to identify an adverse condition (i.e. low storage tank level) and then override the TOU programming to start a piece of equipment/facility.

When considering TOU controls, systems may consider adding strategic options to enhance TOU savings. One such option is the addition of a “tank top-off” set point to manage storage tank levels. Tank top-off typically starts a piece of equipment/facility at a predetermined time of day (typically 2-3 hours prior to on-peak) to ensure the highest tank levels possible prior to application of on-peak TOU restrictions.

Implementation of TOU controls may have

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unintended consequences. For water systems, TOU controls may result in increased motor start/stop cycles during periods of high water demand or may result in water quality degradation resulting from inadequate storage tank turnover during periods of low water

demand. While TOU rates may be appealing for wastewater facilities, careful consideration of wastewater facility capacity, unit processes and regulatory discharge limits should be given before implementation.



Goldfield Arsenic Treatment Plant Project, taken by NDEP staff

Wastewater Operators Certified



The following wastewater professionals passed their Wastewater Treatment, Laboratory, Collection, Industrial Waste Inspector, and Nevada Plant Maintenance exams in March 2011.

WASTEWATER TREATMENT GRADES

Grade 1: Anna M. Bell, Kenneth Dela Vega, Jeffrey Donahue, Jason Pengelly, Ricardo Sanchez, Samuel Shamblin, Michael Wiley

Grade 2: Jeff Bloom, JLee Smith

NEVADA COLLECTION

Grade 1: Christopher Miller, Nate Richmond

Grade 3: Guy Kikuchi

WASTEWATER LABORATORY ANALYST

Grade 1: Jason Rivera, Ricardo Sanchez

Grade 2: Jason Rivera

NEVADA PLANT MAINTENANCE

Grade 1: David Williams

Grade 2: Jeremiah Collins, Antonio Zavala

Grade 3: Johnny Davis, Shawn Dixon, Paul Reed

Wastewater Exam dates for 2011:

Exam date: 9/15/11

Deadline - 8/15/11

Exam date: 12/15/11

Deadline - 11/15/11

Water Operators Certified



The following water professionals passed their Water Treatment and Water Distribution exams in March 2011.

Water Distribution Grades:

Grade 1: Louis Ball, Sierra Brewer, Tim Carlin, Dean Cernick, Elizabeth Clemens, Michelle Cuellar, Michael Duncan, Donald Gonzales, Chad Henriod, Russell Holmes, Tanner Humphrey, David Jones, John Key, David Madden, Mathew Martensen, Sheldon McKnight, John Miers, Louie Ortega, Aaron Palmer, Ryan Pearson, Nathan Richardson, Charles Sindelar, Chuck Sweeney, Damon Tupa, Tyler Viani, Charlie Wells, Ryan Wheeler, Brian Wilson, Angela Worrad

Grade 2: Shanon Daines, Clifford Dickman, Dennis Galleron, Charles Gomes, Andrew Hickman, Adrian Johnson, Ryan Kolda, Shawn Lochridge, Scott Payne, Grant Perkins, Jerad Reid, Kelly Reyna, Roger Sutton, Marcus Urban

Grade 3: Michael Crow, Scott Durbin, Brandon Garden, Thomas Gardner

Grade 4: John V. Smith

Water Treatment Grades:

Grade 1: Michelle Cuellar, Christian Delladio, Jason Dukek, Lyman Ellis, Gina Hawkins, Wesley McClain

Grade 2: Scott Blaty, Michael Boney, Christian Delladio, Andrew Hickman, Adrian Johnson, James Kunzi, Tyler Viani

Grade 3: John Fassman, Brian Gibbs, Jason Hudak, Scott Schunter, James Souba

Grade 4: Kelly Hale

**Water Operator Certification Exam Date: 9/21/11 Exam date
Deadline: 5:00 p.m. on August 8, 2011**

TRAINING CALENDAR FOR 2011

TCR/ Disinfection of Tanks & Pipes

by: Andy Anderson, NvRWA

July - Panaca & Overton

August - Ely & Silver Springs

Contact: Bob Foerster at 775-841-4222

July 15, 2011 - Review for Exam

by: Andy Anderson

Contact: Crystel Montecinos 775-240-1396

August 19, 2011 - Shut - Off Type Valves

by: Bob Lindstrom, American Flow Control

Contact: Crystel Montecinos 775-240-1396

August 24, 2011 - SCADA

N. Tahoe Events Center, Kings Beach, CA

Contact: Stevan Palmer 775/750-1884 or
spalmer@rcac.org**Sept 14 - 15, 2011 -****Distribution Op Cert Test Prep - Grades 1 & 2**

N. Tahoe Events Center, Kings Beach, CA

Contact: Stevan Palmer 775/750-1884 or
spalmer@rcac.org**September 23, 2011 - Backflow & Cross
Connection Prevention Devices**

by: Sean Perry, Apollo Valves

Contact: Crystel Montecinos 775-240-1396

September 28 - 29, 2011 -**Wastewater Operator Certification Test Prep**

N. Tahoe Events Center, Kings Beach, CA

contact: Stevan Palmer 775/750-1884 or
spalmer@rcac.org**Oct 21, 2011 - General Water Chemistry**

by: Max Shen - TMWA

Contact: Crystel Montecinos 775-240-1396

**November 2, 2011 - Wastewater Small Sys-
tems Management Plans (SSMP)**

N. Tahoe Events Center, Kings Beach, CA

Contact: Stevan Palmer 775/750-1884 or
spalmer@rcac.org**November 18, 2011 - Distribution Topics:
Basic Water Works Products**

by: Pak Hughes & Steve Staudy

Contact: Crystel Montecinos 775-240-1396

December 9, 2011 - Regulations Update

by: R. Cooper & L. Edrosa

Contact: Crystel Montecinos 775-240-1396

**December 15, 2011 - O & M III - Wells, Valves,
Water Mains, Hydrants and Meters**

N. Tahoe Events Center, Kings Beach, CA

Contact: Stevan Palmer 775/750-1884 or
spalmer@rcac.org***Attendees can register for RCAC's Kings
Beach Training online at:****<http://www.rcac.org/doc.aspx?730>****Online Training - by: RCAC**Contact: <http://www.rcac.org>**Ongoing On Site - Various Management,
Board, Wastewater and Water Topics, at your
request - NvRWA**

Contact: Bob Foerster at 775-841-4222

Upon Request: Instructor-Lead CSUSac Courses: Distribution or Treatment, 6 - 8 weekly trngs. Contact NvRWA for details and to schedule. Gain the approved post-secondary training while preparing for your exams Contact: Bob Foerster at 775-841-4222 send us your email address to get on the announcement list.

Updates and Announcements

Nevada Water and Wastewater Operators' Forum

At a joint meeting of the NTC and Operators' Forum on June 1, 2011, the 2 groups consolidated, forming The Nevada Water and Wastewater Operators' Forum (NWWOF). This consolidation places the exam outcomes, analysis and training direction planning into one industry group. The Certified Operators' Forum will assume the same tasks for wastewater from the NTC, and coordinate with NWEA, along with the responsibility for developing and editing the *Water Lines* quarterly.

Change of Mailing Address Requested

Operator Certification Administrators have noted that a number of certificates are being returned to the State, because Operators have not updated their mailing addresses after moving. Operators are asked to promptly notify the State when they have changed addresses. Please contact Nan Paulson at 775-687-9447 or npaulson@ndep.nv.gov

In Memory of Dana Pennington

Dana Pennington passed away peacefully at Renown Medical Center with his family at his side on June 6, 2011. A proud native Nevadan, Dana was born in Ely on April 15, 1946, to Helga (Beck) and Robert Pennington. Dana attended schools in Ruth until the family moved to Reno in 1956. In Reno, he attended Central Junior High School and graduated from Reno High School in 1964.

Dana served in the U.S. Navy during the Vietnam War as a Seabee and was stationed in Phu Bai, Vietnam, Kodiak, Alaska, and Beeville, Texas. Returning from his tour of duty, Dana enrolled in the University of Nevada and earned a degree in Natural Resources. After graduation, he went to work for the State of Nevada in the Health Division in 1977. He later moved to the Environmental Protection Division. At both State agencies, he was an Environmental Scientist administering the Safe Drinking Water Act. His professional legacies are the safe and clean waters found throughout the State. Dana also served on the Nevada Wildlife Board of Directors. He retired from State service in 2007.

An avid outdoorsman, Dana enjoyed hunting, fishing, boating, motorcycles and horseback riding. For many years, he participated in the annual reenactment of the Pony Express, riding his horse through Central Nevada. He also enjoyed sports, and with Mary, was a big supporter of the University of Nevada's athletic program. They regularly attended Wolf Pack football, basketball and baseball games. Throughout his life, Dana was on a quest to find Big Foot and spent many enjoyable hiking trips looking for the elusive beast.

Dana loved Nevada and enjoyed traveling throughout the State. He had friends in most of Nevada's cities and small towns. He had a preference for all things Nevada.

From the obituary published in the Nevada Appeal newspaper on Sunday, June 12, 2011

TRAINING CONTACTS

2011 Nevada Water and Wastewater Operator's Forum Members:

Harvey Johnson, Chair 775-745-7087
hej@ivgid.org

John Hulett, Vice Chair 775-954-4612
jhulett@washoecounty.us

Bob Foerster 775-841-4222
nvrwa@pyramid.net

Cameron McKay, 775-588-3548
cam@kgid.org

Dale Johnson 775-738-6816
djohnson@elkocountynv.net

Dave Johnson 702-567-2051
dave.johnson@lvvwd.com

Dean Adams 775-784-1474
vdadams@unr.nevada.edu

Don Allen 775-577-2223
ssmwc@sbcglobal.net

Lynn Forsberg 775-738-6816 X 211
Forsberg.const@gmail.com

Mark Walker 775-784-1938
mwalker@unr.nevada.edu

Tom Georgi 702-822-8026
Thomas.georgi@lvvwd.com

Vacant

University of Nevada, Reno CABNR & Cooperative Extension

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 email at: xtelle@aol.com

Community College of Southern Nevada Wastewater Water Technology Program www.cleanwaterteam.com

LeAnna Risso at 702-668-8487
LRiso@cleanwaterteam.com

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. Contact Jeff Butler 702-258-3296. For the current training calendar see www.wwet.org.

State of Nevada Water Certification Exams

All exams will be proctored on the date listed. Applications and fees are due to the State Bureau of Safe Drinking Water 45 days before exam dates. A proctor will contact examinees to schedule testing. Contact: Ron Penrose at 775-834-8017 for information about the exam dates.

Water exams are scheduled in the first three calendar quarters of each year at locations throughout the state. For additional information on

Drinking water call: 775-687-9527 or go to

http://ndep.nv.gov/bsdw/cert_home.htm

Wastewater call: 775-465-2045 or go to

www.nvwea.org

Nevada Water Environment Association

Jennifer McMartin

(775)465-2045

jenniferm@nvwea.org

www.nvwea.org

Nevada Rural Water Association

Please send requests for training to www.nvrwa.org or contact staff directly at 775-841-4222.

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STATE OF NEVADA
DIVISION OF ENVIRONMENTAL PROTECTION
OFFICE OF FINANCIAL ASSISTANCE
901 SOUTH STEWART STREET SUITE 4001
CARSON CITY NV 89701
RETURN SERVICE REQUESTED

Water Lines

Summer 2011

Nevada Drinking Water and Wastewater Training Coalition

American Water Works Association
California / Nevada Section
www.ca-nv-awwa.org or 909-291-2100

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

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

UNR Dept. of Civil Engineering
Dean Adams 775-784-1474

Rural Community Assistance Corporation
www.rcac.org or 775-323-8882
Stevan Palmer and Preston Kinne

Tigren, Inc.
Crystel Montecinos 775-240-1396

U.S. Environmental Protection Agency,
Region 9
www.epa.gov/region9
Jason Gambatese, 415-972-3571

Bureau of Safe Drinking Water
<http://ndep.nv.gov/bsdw/index.htm>
CEU approval:
Kelly McGowan, 775-687-9527
Jim Balderson, SWAP 775-687-9517
Patty Lechler 775-687-9529
Bert Bellows, arsenic 775-687-9525

Nevada Rural Water Association
www.nvrwa.org or 775-841-4222
Bob Foerster, Executive Director
Andy Anderson
Curtis Duff
Lizzy Andrew
Paul Strasdin
Dan Tarnowski
Teresa Taylor
Jim Weeks
Tatiana Zehl

Indian Health Services
Dominic Wolf 775-784-5327

UNR Colleges of 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>

NDEP
<http://ndep.nv.gov/index.htm>
Daralyn Dobson, DWSRF 775-687-9489
My-Lihn Nguyen, Wellhead Protection
775-687-9422

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

Public Utilities Commission
www.puc.state.nv.us
Janelle K. Thomas, P.E., Water Engineer
775-684-6146