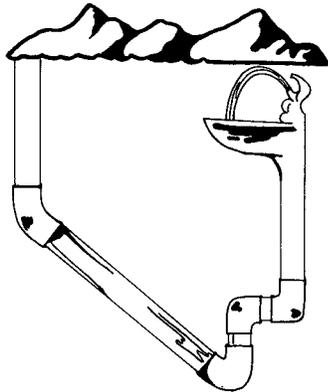


Water Lines



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

Volume 30 Fall 2008 Issue

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Focus on Southern Nevada

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Environmental Protection

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Featured Operator: Kevin Fisher of LVVWD

By Joe Beard Jr., Farr West Engineering

Kevin Fisher has been in the water business for twenty five years. He is currently the Director of Operations for the Las Vegas Valley Water District (LVVWD). A long journey led him to his current position.

Kevin was raised in New Mexico. He attended New Mexico State University, and received a Bachelor of Science Degree in General Engineering. Studying civil engineering prepared Kevin for his career in the water industry.



Kevin Fisher of LVVWD

Kevin got his first experience working for a utility in California. He started in a laboratory doing geothermal work for San Bernardino Municipal Water. He was hired as an Engineer, and later served as Superintendent.

Featured
Operator

It was while working in California that Kevin sought to further his education. He studied at Cal State University, and earned a Masters in Public Administration. Kevin developed valuable communication and management skills during his studies. He feels that this experience was essential for the career path he has chosen.

He enjoyed serving the community of San Bernardino for over ten years. However, Kevin was interested in living in Nevada, and sought a position in the Las Vegas area.

He moved his family to Henderson after joining the LVVWD staff. He considers Henderson a good place for families, and has lived there for over fourteen years. He says, "Henderson has been great to my family!"

Kevin was hired by the Las Vegas Valley Water District as a Construction Engineer. He served in that capacity for several years, and was then promoted to Manager of Production. More recently, Kevin has taken over as the Director of Operations for LVVWD.

Kevin has played a part in developing several key projects for LVVWD over the years. Two projects he is particularly proud of are the creation of an Asset Management Group, and the development of an Energy / Water Quality Management System.

The Asset Management Group was created with the goals of

(Continued on page 3)

Regulatory Feature: CUPSS Software for Small Utilities

By Sara Jacobs, EPA

What is CUPSS?

CUPSS is a simple, free, easy to use asset management program that helps small utilities manage and finance existing and future drinking water and wastewater infrastructure. The use of this program is a way to organize, document and communicate essential technical, financial, and managerial information about your utility.

What is Asset Management?

Asset management is managing infrastructure assets to minimize the total cost of owning and operating them, while delivering the service level customers desire.

What features does CUPSS include?

This program includes an asset inventory to consolidate information about all of the infrastructure assets including when they were installed, the life expectancy, criticality, current condition, required maintenance tasks, replacement costs, etc.

CUPSS is equally helpful with tracking finances, creating detailed budget reports and providing a place to track actual expenditures. Similarly, you can create a customized maintenance schedule in CUPSS and even choose from many common



maintenance tasks already included that are typically required for public water systems such as calibrating equipment or exercising valves. You can keep track of when the maintenance was done, how much it cost, who did the work, etc. Finally, the program organizes the information entered to print out financial

and asset management reports with charts and graphics that help to put the information in a context to better understand and communicate the needs and priorities of the utility.

How will CUPSS help small water systems?

While each user will achieve a unique benefit, EPA's goal is for CUPSS to:

- Assist with communication between utility staff and decision makers.
- Help move utilities from reactive management to informed decision making.
- Facilitate more efficient and focused utility operations.
- Improve financial management to make the best use of limited resources.

How do I find out more about CUPSS?

Check out the EPA website at www.epa.gov/cupss

Editor's Note:

Farr West Engineering will be offering training on CUPSS Software beginning in September. Call 775-851-4788 for workshop details and registration.

Exit Polling conducted by NTC Board

By Joe Beard Jr., Farr West Engineering

The Nevada Drinking Water and Wastewater Training Coalition (NTC) will be conducting surveys after Operator Certification Exams in September of 2008.

Based on feedback from Operators, as well as reports on passing statistics from previous exams, the NTC Board moved recently to create a brief questionnaire for the purposes of collecting information from Operators as they leave the Certification Exams.

Participation in the survey is voluntary. No names will be recorded on the survey.

The NTC Board is interested in creating a data set that describes the preparation habits of Operators seeking Certification. Example questions include: How many weeks did you spend preparing for this test? and How many hours per week did you spend preparing for this test?

(Continued on page 7)

The Spigot Q & A: Focus on Sampling



Q 1. If a water sample tests positive for total coliforms, the utility must:

- a. Test that sample for fecal coliforms or *E. Coli*
- b. Take repeat samples from the same location, as well as upstream and downstream
- c. Increase the number of routine samples in the following month
- d. All of the above

Q 2. Ideally, a lab-provided sterilized container is used for coliform samples. That bottle will contain a small amount of:

- a. Nitric acid
- b. Sodium thiosulfate
- c. Sodium hydroxide
- d. Chlorine

Q 3. Aesthetic water quality indicators are:

- a. Fluoride and Boron
- b. pH and temperature
- c. Appearance, color and odor
- d. Presence of coliforms

Q 4. A representative sample is:

- a. A sample taken at first draw
- b. Taken by the shift supervisor
- c. The same temperature as water in the distribution system
- d. A sample that is nearly identical to the body of water being sampled

Q 5. The Chain of Custody document for a sample should be signed by:

- a. Each person who takes possession of, or relinquishes a sample
- b. The shift supervisor / manager
- c. The Nevada Division of Environmental Protection
- d. The sampling attendant, the sampler, and the supervisor

Featured Operator: Kevin Fisher

By Joe Beard Jr., Farr West Engineering

preserving utility assets and maximizing reliability. The group considered world-wide practices and technologies when deciding how to best create financial and maintenance strategies that would better serve the District.

Even the practices of other industries were reviewed, such as the Reliability Centered Maintenance (RCM) programs developed by the airline industry. Lessons learned from collaboration with varied sources were integrated into programs designed to extend the service life of current infrastructure. Financial programs developed to properly plan for future capital improvements were also improved by the Asset Management Group as a result.

The Energy / Water Quality Management System was developed in order to maximize system efficiency, both with regard to energy consumption and water quality. To reduce power consumption, optimization programs were developed that factor-in the cost of power at different times of day. An extensive hydraulic model is utilized to ensure that power is used wisely within the distribution system.

Furthermore, the hydraulic model and other custom software are used to predict system demands, optimize pumping strategies, and track delivery of drinking water in real-time. The System tracks the time the water left the treatment plant and is tasked with minimizing the time drinking water remains in the system. Rapid and efficient delivery of water to the customer has also reduced the water system's susceptibility to Disinfection Byproducts.

The Energy / Water Quality Management System has been credited with saving the utility over \$1,000,000 per year in electricity, while improving water quality. The Electric Power Research Institute (EPRI) aided the LVVWD in the development of this System.

Management of exciting programs, and the development of new policies and technologies are sure to keep Kevin busy professionally. On a personal level, with both of his children attending colleges out-of-state, Kevin has more free-time than in years passed. Thus, he has recently taken up golf!

Answers to The Spigot questions

1. (d) The Total Coliform Rule specifies how many, where and when repeat samples must be taken. Any positive coliform sample will require a cascade of renewed sampling.
2. (b) Sodium thiosulfate is added to coliform sampling bottles to destroy chlorine residuals.
3. (c) Aesthetic water quality indicators are those that affect the color, taste, odor or appearance of water.
4. (d) A sample is meant to represent the larger portion of water that is being tested. The sample portion should be nearly identical in content and consistency to the body of water being sampled.
5. (a) The Chain of Custody is a required legal document (NAC445A.0636). It is a sampler's attestation of authenticity. It also provides information on the sample integrity.

Featured System: Southern Nevada Water Authority

By Joe Beard Jr., Farr West Engineering

The Southern Nevada Water Authority (SNWA) is a cooperative agency formed in 1991 to address Southern Nevada’s unique water needs on a regional basis. SNWA is governed by a Board of Directors comprised of representatives from each of its member organizations.

Member agencies provide water and/or wastewater services to Southern Nevada and include Boulder City, Clark County Water Reclamation District, Henderson, Las Vegas and North Las Vegas, Big Bend Water District and Las Vegas Valley Water District.

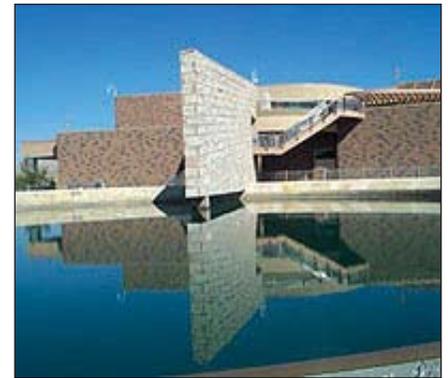
The Water Authority’s responsibilities include managing current water resources and ensuring that southern Nevada has enough water for the future.

SNWA also maintains regional water treatment and delivery systems. The agency monitors regional water quality to ensure that it meets or exceeds the standards of the Safe Drinking Water Act.

Additionally, SNWA oversees a conservation plan focused on teaching the public how to use water efficiently. Customers are eligible for numerous water-saving rebates and services provided by SNWA.

The Southern Nevada Water Authority operates two major water treatment facilities: the Alfred Merritt Smith Water Treatment Facility and the River Mountains Water Treatment Facility.

Built in 1971, the Alfred Merritt Smith Water Treatment Facility currently treats most of the drinking water for Las Vegas.



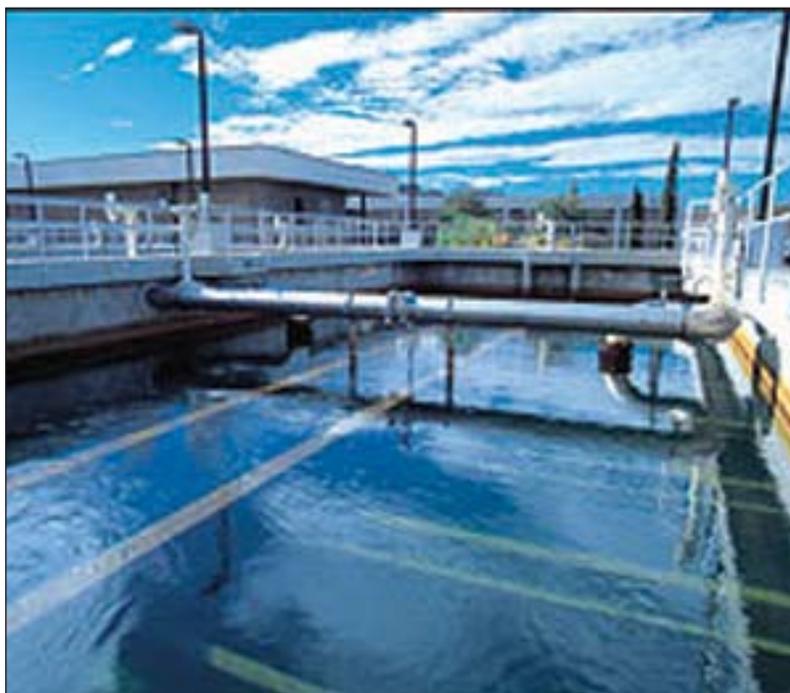
Above:
River Mountains Facility

Recent improvements to the facility have increased the plant’s reliability and capacity. The facility can treat up to 600 million gallons per day.

The River Mountains Water Treatment Facility treats up to 300 million gallons of water per day. The facility was designed so it can expand to meet southern Nevada’s needs. In the future, the River Mountains facility will be able to treat up to 600 million gallons of water per day.

The River Mountains facility provides additional reliability and capacity to southern Nevada’s municipal water treatment and distribution capabilities. It began delivering treated water in October 2002.

Both treatment facilities use ozone as the primary disinfection treatment process.



At left:
*The Alfred Merritt
Smith Facility*

Safety Zone: First Aid

By Stevan Palmer, RCAC

Have you ever been called upon to render assistance to an injured co-worker? Would you know what to do? When approaching a potential accident victim, there is a step by step protocol to follow before actually rendering first aid.

First, assess the situation. Don't become a victim yourself! Determine if it is safe to enter the area. Is there potential electrical exposure, hazardous atmospheres, or collapsed structures? A good knowledge of your workplace and potential hazards will help you make this determination.

Next, locate the victim, or victims, and call out to them. If there is no response, immediately request medical assistance. It is important to know how to call for help. Your utility should have emergency contact numbers posted and available to you in all work areas.

Once you know the area is safe to enter, you are properly protected from existing hazards, and help is on the way, you can begin to determine if the victim is consciousness and responsive. Ask these three questions: What's your name? Where are you? What happened? If the person cannot answer, they are considered unresponsive, even if conscious. If the person is conscious and

responsive, collect more information that may assist emergency medical personnel to treat the victim when they arrive. Ask about:

S – Signs and Symptoms

A – Allergies

M – Medications

P – Past history of these symptoms

L – Last oral intake

E – Events leading up to accident or injury

If a victim is unconscious, check for respiration. If not breathing, make sure the airway is unobstructed. If obstructed, look for a foreign object, and if you can remove it, do so. If not, perform a chest compression to dislodge it. If the airway is not obstructed and the victim is still not breathing, CPR must be performed. Only attempt CPR if you are properly trained and certified.

If the victim is conscious and responsive, you may now conduct a secondary examination. Based upon your own observations and your conversation with the victim, determine the types of injuries and their severity. Find out the circumstances that lead to the accident or injury.

If the victim is unconscious but breathing, begin a head-

to-toe check. Look and feel for bleeding or other fluids, fractures, abrasions, etc. Check inside the mouth for sign of bleeding or other fluids.

Avoid moving the victim if there is any reason to suspect head, neck or spinal cord injuries. Don't forget to check for a Medic Alert tag, which could contain important medical information about the victim.

Becoming certified to provide first aid and CPR through formal training will not only help utility operators provide the best possible medical assistance, it will also help protect them from legal liabilities.

For information on CPR and first aid certification, contact the American Red Cross at 702/791-3311 (www.redcrosslasvegas.org) in Southern Nevada, or 775/856-1000 (www.nevada.redcross.org) in Northern Nevada.

There are also numerous online certification courses available. Try www.redcrossonlinetraining.org, www.cprtoday.com, www.cprpros.com, or simply run an internet search for "CPR Training" or "First aid training". Talk to your supervisor and ask for his or her support in getting you these important certifications.

Wastewater Operators Certified



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

Treatment grades 1, 2, 3 and 4

Grade 1: Samuel Billin, Jeffrey Cearfoss, Matt Conner, Kip Dretzka, Timothy Higgins, Auston Kinser, Lance Kriegh Jr., Luis Martinez, Dave Smith

Grade 2: Chris Baracosa, Michael Brown, Jacqueline Edwards, Jay Freeman, Brian Mitts, Paul Ramirez, Frazier Speaks

Grade 3: Allen Hardinger

Grade 4: Michael Fritschi

Collection grades 1, 2, 3 and 4

Grade 1: Raymond Allen, Nathan Bush, Jake Jacobson, Christopher Lieurance, Carl Rossignol

Grade 2: Nathan Bush, Jake Jacobson

Wastewater Laboratory Analyst grades 2, 3 and 4

Grade 2: Mary-Lee Murrell, Charles Oliveira

Grade 3: Jennifer Pereos

Grade 4: Helene Decker

The NWEA Certification Board is pleased to announce that computerized exams are now being offered! Pencil and paper exams will continue to be offered quarterly for the same fees.

New Water Operators Certified



These water 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: Patricia Cannon, Hailey Carlson, Jason Caughron, Charles Chino, Charles Dettling, Amanda Filut, Wekianos Hailu, James Hendrickson, David Isom, Theodore Jost, Todd Kirsten, Joe Lopez, Dan Mitchell, Kuda Mutama, Gerald Temoke, Marci Westlake

D-2: Daniel Bevan, Kim Boldi, Scott Carpenter, John Dufresne, Richard Giltner, Priscilla Howell, John Ingalsby, Kathleen Kinkade, William McMullin, Eliodoro Moreno, Jerry Munk, Kerry Potteet, Stephen Povelko, Keith Ristinen, Nancy Salazar, Michael Thicke, Bryce Twichell

D-3: Scott Benedict, Scott Blaty, Daren Demangate, Gregory Kodweis, Pete Pribyl, Steven Priscu, Kevin Retterath

D-4: Brett Goodnow Sr., Jeremy Lustig, Richard Mills, Brent Smith, Jamaine Smith

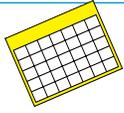
Treatment grades 1, 2 and 3

T-1: Raymond Beers, Galen Benn, Ronald Besserer, Randen Buckles, Michael Crow, Larry Grant, Jason Hudak, James Imperial, Alex Mackenzie, Kuda Mutama

T-2: Charles Corrente, Scott King, John Kinnie, Mitchell McGlynn, Eric Mothershead, Keith Ristinen, Edward Rusk

T-3: Wayne Vanassche

T-4: Sheryl Houlihan



Training Calendar for 2008

September 13/14 - Fernley - D1/D2 Math and Certification Review. Contact NvRWA at 775/841-4222 or nvrwa.org for more information.💧

September 24/25 - Ely - Confined Space and Trench Safety Awareness. Contact NvRWA at 775/841-4222 or nvrwa.org for more information.💧

October 5-8 - Reno - NvRWA Annual Conference. Contact NvRWA at 775/841-4222 or nvrwa.org for more information.💧

October 24 - Various locations - UNR Video conference. Topic: To Be Announced. Info: Crystel Montecinos at 775/240-1396.💧

November 14 - Various locations - UNR Video conference. Topic: State & Federal Regulations. Info: Crystel Montecinos at 775/240-1396.💧

Ongoing - On-site Training (including assistance with CUPSS software). Contact NvRWA at 775/841-4222 or nvrwa.org for more information.

Call for New Board Members

The Nevada Drinking Water and Wastewater Training Coalition is a nonprofit organization dedicated to protecting public health and the environment in Nevada's communities by ensuring that high quality training and education are provided for those responsible for drinking water and wastewater systems.

A board of directors presides over the activities of the coalition. Each board member serves a two-year term.

At the upcoming September 12, 2008 meeting, elections will be held for two opening seats. This is a call for volunteers to become Coalition board members. Nominations for the board will be accepted through September 12, 2008. Contact Bob Foerster at 775-841-4222 or nvrwa@pyramid.net for more info.

Useful Training Contacts

University of Nevada, Reno
Colleges of Agriculture, Biotechnology and Natural Resources & 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 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 and fees are due to the state (Steve Brockway) 45 days before exam dates. A proctor will contact examinees to schedule testing. Contact Ron Penrose at 775/834-8017 for information about 2008 exam dates.

Water exams are scheduled quarterly at locations throughout the state. Info: 775/687-9527 or http://ndep.nv.gov/bsdw/cert_home.htm. Additional info: 775/465-2045 or www.nvwea.org. **NOTE: No Exam in Dec. '08**

Nevada Rural Water Association

Please send requests for training through nvrwa.org, or call 775/841-4222.

💧 This symbol designates Nevada Division of Environmental Protection pre-approved training for certification renewal contact hours.

Exit Polling conducted by NTC Board

(Continued from page 2)

The NTC Board is also interested in the kinds of resources Operators use to prepare for examination. An example question is: Of the materials that you used, which were the most useful in preparing for this test?

It is the intent of the NTC Board to gather and compile data relevant to Operator Certification Exam preparation. The analysis of this data will be used to help guide the direction of future training efforts.

The NTC Board is continually looking for new ways to improve training opportunities for Operators seeking Certification. The Board also seeks to improve the quality of training throughout the industry.

Nevada Drinking Water and Wastewater Training Coalition

American Water Works Association California/Nevada Section

www.ca-nv-awwa.org
909/291-2101

Indian Health Service

Dominic Wolf, 775/784-5327

NDEP

<http://ndep.nv.gov>

Adele Basham, DWSRF, 775/687-9488

Michelle Stamates, AB 198 Water

Grant Program, 775/687-9331

My-Linh Nguyen, Wellhead Protection,

775/687-9422

Nevada Rural Water Association

www.nvrwa.org

775/841-4222

Bob Foerster, Executive Director

John Allred

Curtis Duff

Teresa Taylor

Andy Andersen

Dan Tarnowski

David Willard

Public Utilities Commission of Nevada

www.puc.state.nv.us

Mark Clarkson, P.E., Water

Engineer, 775/684-6132

Leslie Tench, Senior Engineering

Analyst, 775/684-6140

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

Patty Lechler, 687-9529

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, 775/750-1844

U.S. Environmental Protection Agency, Region 9

www.epa.gov/region09

Sara Jacobs, 415/972-3564

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.

Crystal Montecinos, 775/240-1396

UNR Colleges of Natural Resources and Environmental Science, and UNR 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

2008 NTC Board Members

Bob Foerster, Chair
nvrwa@pyramid.net or 841-4222

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vdadams@unr.nevada.edu or 784-1474

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cauckly@calwater.com or 408-367-8232

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