

# Course Descriptions 2010

## **Buried Treasure**

*0.7 W/WW CEUs March 4, Coeur d'Alene, September 1, Twin Falls FREE*

The water distribution system represents the largest financial investment most communities make. This one-day course begins with an overview of the maintenance and management issues facing water utilities. Distribution system inspection and monitoring topics including pressure, taste and odor problems, disinfection, corrosion and mapping are covered. Piping systems and materials are also discussed. This course is designed for less experienced operators but is suitable for all levels. This class meets part of the very small water licensure requirements.

## **Collections I & II Licensure Review**

*1.4 WW CEUs February 24-25, Boise, September 7-8, Lewiston \$70*

This workshop taught by Victor Coles will provide training and review for both collection system certification and day-to-day activities. Collections system maintenance discussions will include the causes and effects of hydrogen sulfide, oxygen deficiency, trench safety, and confined space entry. This exam review includes practice tests for Class I & II.

## **Collections III & IV Licensure Review**

*1.4 WW CEUs July 27-28, Idaho Falls \$70*

Topics in this certification review class taught by Victor Coles will include such items as communications, safety, collection system structural analysis via TV, hydro-cleaner, and hydro-vac use in sewer line maintenance, causes and effects of hydrogen sulfide gas, trench safety, and confined space entry procedures. The exam review includes practice tests for Class III & IV.

## **Crew Leader**

*0.7 W/WW CEUs June 1, Orofino, August 31, Idaho Falls, November 30, Boise FREE*

This one-day class focuses on building supervisory skills and planning successful repair projects. There are group exercises and organizational tools to help operators and managers be more effective and efficient. Aspects of crew management, including safety, traffic control and blueprint reading will be covered. Not every emergency or project has to be a disaster.

## **Cross Connections Basic**

*0.7 W/WW CEUs August 4, Grangeville, October 6, Paul FREE*

This very timely workshop will outline the requirements of water purveyors in developing a cross connection program. Bill Thompson, a certified cross-connection instructor, will address all of the elements that are essential for a safe control program. Bill will cover the various types and applications of CC devices. A discussion of the Pacific Northwest codes as well as how to develop and enforce an ordinance will also be addressed. Case studies will highlight the importance of implementing and maintaining a written program.

## **Disinfection**

*0.7 W/WW CEUs May 13, Coeur d'Alene, August 11, Paul FREE*

This one-day workshop will discuss water chemistry and chlorine, the theory of how chlorine works, associated math, and water-borne diseases. Chlorination and hypochlorination equipment, safety, and storage will be addressed by Thom Tackman of Process Solutions, Inc. Coliform sampling and approved testing for residual and bacteria are included. This includes a discussion on the pros and cons of ultraviolet light (UV), ozone, and other methods of disinfection. This class fulfills part of the very small water licensure requirements.

## **Intro To Sampling/Distribution Monitoring**

*0.7 W CEUs September 28, Twin Falls, September 30, Nampa FREE*

This course covers proper sampling and field-testing techniques for distribution system monitoring. Discussions will include the importance of consistency training and written sampling plans. Techniques covered in the course will include the measurement of several common parameters relating to distribution systems such as disinfection residual (chlorine or chloramines where applicable) pH and conductivity. A short overview of data interpretation is included. Participants will also gain hands-on experience with various high range hypochlorite and chlorine titrations as they apply to line disinfection.

## **Fun With Numbers**

*0.7 WWW CEUs November 3, Pocatello FREE*

Fractions, decimals, and other basic computations using whole numbers, story problems and how to solve them will be taught in this one-day class. In addition, conversions, equations, areas, volumes, and formulas will also be taught. Given dimensions and plant data, students will practice calculation of tank volumes and detention times. Basic hydraulic formulas for flows and velocities through pipelines and open channels are covered. This is a fun class!

## **Intro to Drinking Water and Wastewater**

*0.7 W/WW CEUs February 3, Meridian FREE*

This class will be directed toward the entry-level operator who needs a basic introduction to water and wastewater terminology, treatment methods, biology, regulations, and math. The class will be taught by Veronica Shawcroft.

## **Land Application Licensure Review**

*1.4 WW CEUs February 17-18, Pocatello \$70*

Prepare for the reuse licensure exam by reviewing the Wastewater Reuse Program, including operations and site management, pretreatment, lab testing, site monitoring, and loading rates. Reuse guidance and policy developments will be discussed, along with operator math and other certification requirements. This workshop is presented by Daniel Burgard and/or Daniel Bruner of Cascade Earth Sciences.

## **Lagoons Operation & Maintenance**

*0.7 WW CEUs June 17, Meridian, October 21, Coeur d'Alene \$50*

Veronica Shawcroft discusses the basics of lagoon operation and maintenance, including microbiology of a lagoon, factors affecting the efficiency of lagoons, dike maintenance, and weed control. Biochemical oxygen demand, solids, pH and loadings are addressed. Troubleshooting, preventative maintenance, data collection, and permit requirements are included. Specific problems often encountered in the field will also be discussed. This class fulfills part of the very small wastewater licensure requirements.

## **Large Soil Absorption Systems**

*0.7 WW CEUs June 9, Idaho Falls, July 21, Boise \$50*

This workshop is designed for operators that maintain a soil absorption system. The student will learn about system design, pump requirements, annual reports, operation and maintenance plans, and bacteriological characteristics and how they work, pollution prevention methods, pH, loading rates and toxicity, as well as criteria to recognize a failing system.

Idaho has 85 soil absorption systems. This workshop will help you maintain and identify good operational practices to enhance the life of your system. This class fulfills part of the very small wastewater licensure requirements.

## **Pumps and Motors**

*0.7 W/WW CEUs June 8, Idaho Falls, July 20, Boise FREE*

Ross Spackman, PhD has designed this one-day course for persons involved in the operation and maintenance of mechanical equipment in water and wastewater treatment plants and pump stations. Hands-on lab exercises and troubleshooting simulations will be part of the class. Reading and interpreting pump curves will also be covered. Bring your calculator to practice working simplified math problems pertinent to pumps and motors. This class also fulfills part of the very small wastewater licensure requirements.

## **Simplified Water/Wastewater Analysis**

*0.7 W/WW CEUs April 13, Lewiston, April 15, Sandpoint FREE*

This one-day class is designed to improve laboratory skills and develop hands-on experience with the testing techniques and parameters commonly used in water/wastewater treatment. Techniques practiced in the hands-on laboratory include pH, dissolved oxygen, and chlorine testing. For each parameter, calibration, verification, measurement, and troubleshooting techniques will be addressed and practiced in laboratory exercises. Analysis of samples and standards will be performed using portable and laboratory instruments.

## **Small System O&M**

*0.7 W CEUs September 2, Boise FREE*

This workshop addresses the operation and maintenance of small drinking water systems. John Marble will discuss topics that include monitoring water and wastewater quality, disinfection, sampling techniques, and routine system checks. The fundamentals of data collection will be covered.

## **Sanitary Survey**

*0.7 W CEUs February 4, Meridian FREE*

Jim Phillips of RCAC uses DEQ's enhanced sanitary survey as the template for this workshop, addressing the operation and maintenance of a small water system. Topics will include volume table, coliform monitoring plans, public water system emergency response plan guide, and protecting against intrusions. The fundamentals of data collection will also be covered.

## **Troubleshooting Motors and Controls**

*1.4 W/WW CEUs June 22-23, Boise FREE*

This two-day course is designed for persons involved in the operation and maintenance of electrical systems and equipment in water and wastewater treatment plants and pump stations. Hands-on lab exercises with test equipment and troubleshooting simulations will be oriented around actual case histories of electrical malfunctions and operating problems. Emphasis will be placed on using control diagrams "ladder logic" as a tool in developing a sequential step-by-step troubleshooting technique. The class is intended for maintenance electricians, plant mechanics and operators with some electrical background and supervisory and technical persons with prior work experience with motors and controls.

## **VSWS Licensure Review**

*0.7 W CEUs February 16, Idaho Falls, August 7(Sat), Post Falls, October 5, Jerome, November 16, Nampa FREE*

This one-day review will cover mathematics, disinfection, safety, general operation and maintenance practices, laboratory, pumping and storage, and the basic characteristics of water. Pat Brown will review example certification exam questions throughout the workshop. This course is specifically designed for operators of very small water systems.

## **Water I & II Licensure Review**

*1.4 WCEUs March 2-3, Sandpoint, June 2-3, Lewiston, December 1-2, Boise FREE*

This intense two-day workshop presents an overview of the drinking water industry. Students will review basic water science including biology, chemistry and hydraulics, plus a major focus on basic math. Other topics include a review of piping, valves, hydrants, pumps, water treatment and regulation. Practice test questions and test-taking strategies are also included. This class meets the education requirements of the very small water system license.

## **Water Distribution III & IV Licensure Review**

*1.4 WCEUs April 20-21, Boise FREE*

This two-day workshop is designed for advanced distribution operators and will help them prepare to pass the certification test. Heath Sheppard will use the ABC Need-to-Know Criteria for water distribution operators as an outline. Topics include system design, regulations, disinfection, water quality parameters, system inspection, O&M and safety and security. Heath will also cover math from basic to advanced and successful strategies for taking exams will be discussed. Students should come prepared with pen and calculator because practice testing will be used in this class!

## **Water Treatment III & IV Licensure Review**

*1.4 WCEUs May 11-12, Coeur d'Alene FREE*

This two-day class is designed for advanced water treatment operators to help them prepare to pass the levels III & IV Water Treatment Licensure exam. Thom Tackman will review system design, regulations, disinfection, filtration, water quality parameters, O&M and safety. Thom will also cover math from basic to advanced as well as strategies for successful test taking. A practice test will be used.

## **Wastewater I & II Licensure Review**

*1.4 WW CEUs March 10-11, Post Falls, October 12-13, Boise, December, 14-15, Jerome \$70*

This review is designed for beginning and intermediate operators who are preparing for Class I & II wastewater operator exams. Pat Brown will cover basic treatment plant components, sampling, laboratory, disinfection. Typical practice exams are included throughout this two-day prep. A tour of a secondary plant is included. Bring your calculator!

## **Wastewater III & IV Licensure Review**

*1.4 WW CEUs August 18-19, Pocatello \$70*

This review workshop is designed for experienced operators. Pat Brown and Veronica Shawcroft will review the concepts of advanced process control, troubleshooting, laboratory and management issues. Students will discuss different approaches to problem solving and will have an opportunity to answer typical exam questions. Don't forget your calculator!

## **Water Tank Maintenance**

*0.7 WCEUs August 10, Paul FREE*

This water storage tank workshop is designed for all operations and maintenance personnel who maintain and/or operate potable water storage tanks. Thom Tackman discusses recommended tank maintenance requirements (such as structural and protective coating inspections), tank operational concerns, tank disinfection and mixing techniques, and site security measures. The instructor will also cover training on water storage problem-solving techniques, and storage tank/chlorination math. This class will provide valuable information for the entry level operator through water system management, and system design engineering team members.

## **Water Treatment**

*0.7 WCEUs March 24, Fruitland, October 20, Coeur d'Alene FREE*

This one-day workshop will cover both conventional water treatment and membrane processes, and will include two water treatment plant tours at United Water Idaho's Marden WTP and Columbia membrane facility. Eric Landsberg and Stuart Hurley of SPF Water Engineering will review conventional treatment processes including coagulation, flocculation, sedimentation, filtration, and disinfection. They will also cover membrane treatment and other advanced processes including UV and ozone. Bring your calculator because we will be working through some example problems. This class meets part of the very small water licensure requirements.

## **Water Treatment Optimization**

*0.7 WCEUs September 9, Coeur d'Alene Nov 4, Idaho Falls FREE*

This workshop will focus on optimizing water treatment processes and maintaining water quality in the distribution system. Eric Landsberg and Stuart Hurley will present strategies for optimizing filter performance, tracking disinfection performance, and controlling DBP formation. Eric and Stuart will also cover distribution system water quality issues including microbiological control and hydraulic optimization.