

**Robert. Funk, MSc., P.E., SME**  
**Director of the Non-Profit School**  
**Professor**

Co-founder of the school in 1988 - 1991

Master Instructor;

Teaching – Engineer; Registered Professional Engineer in civil / environmental engineering

Certified Environmental Trainer.

Certified Train – the – Trainer.

Subject Matter Expert

Author / publisher

Past College credential evaluator

U.S. Congress – Stakeholder / Infrastructure Committee

Past Advisor to the EPA

California State of California (past) Water Certification Stakeholders Advisory Board

Environmental Education Award – NESHTA 2011 – a National Award. He is the winner of the 2011 NESHTA (EPA recognized) competitive Environmental Educator Teacher of the Year award.

### **TEACHING OBJECTIVES**

Chartered the full time, private career school to provide any and all operations classes required by operators to meet employee work goals and meet State and federal operator certification requirements based on sound and effective engineering principles, as follows:

Water Treatment, Grades I – V

Water Distribution, Grades I – V

Wastewater Treatment, Grades I – V

Collections, Grades I – IV

Supervisor Management Class, Grades IV – V

Specialty Certification Classes

40 hour Backflow / cross-connection certification classes

### **EDUCATION:**

**1964** **B.S.** University of New Mexico; Civil Engineering/Marketing

**1986** Certificate - Water Plant Operations; California State University

**1988** Certificate - U.S. E.P.A. - Emerging Technologies for Drinking Water Treatment

**2013** **MSc.** Ashley University, Master of Environmental Science

### **ENGINEERING/TEACHING REGISTRATIONS:**

**1985** California Community College System, Teaching Certificate, Limited Specialty.

**1991** Oregon EIT (engineering) certificate awarded May 29, 1991.

**1992** **CET** - Certified Environmental Trainer; Water and Wastewater, National Environmental Training Association (N.E.T.A.) Phoenix, Arizona awarded December 7, 1992.

**1993 /1994** **PE** - Oregon Registration as a licensed Professional Engineer in Environmental Engineering issued September 28, 1994. License No. 17481.



## **ENGINEERING EXPERIENCE HIGHLIGHTS:**

### **DRINKING WATER –**

Funk has put together “stacked capital funding” for small systems through multiple funding agencies. Additionally, he has completed various design plans submitted to the state for: slow sand filters, package water plants, conventional water plants, pump stations, chemical feeder systems, coagulation- flocculation systems, sedimentation tanks, media filters, membrane filters, ultra-violet disinfection units, chemical and gas chlorine disinfection systems, and storage (clear well) tanks. Director Funk has designed numerous water distribution systems utilizing surface water and groundwater well sources. He has also completed computer based distribution pressure analysis and corrosion control studies. He has extensive experience in preconstruction, and operation start-ups. He writes project O & M manuals on any water treatment or distribution topic.

### **WASTEWATER –**

Funk has completed various design plans submitted to the state for: 20-50 acre facultative lagoon systems, trickling filters, activated sludge systems, tertiary filtration, package wastewater plants, pump stations, chemical feeder systems, coagulation- flocculation systems, primary and secondary clarifiers, media filters with polymer feed, membrane filters, ultra-violet disinfection units, chemical feed systems, and gas chlorine disinfection systems. Director Funk has designed numerous wastewater collections systems, and instructs FOG and SSO classes. He has instructs collections corrosion control classes. He has extensive experience in preconstruction, and operation start-ups. He writes project O & M manuals on any wastewater treatment or collections topic. Over the past 27 years he has also written effective and widely read water system operations workbooks (over 88) for OCT WQA classes. Additionally, he is a permanent member of the Wastewater & State Drinking Water Certification Advisory Board, and makes suggestions to the Board with regard to state operator certification legislation. Currently he is lobbying for the creation of California wastewater operator CEUs and is expected to be asked to join the state Advanced Water Treatment Advisory task force (state legislation).

### **ADDITIONAL PAST LICENSING:**

#### Oregon

Oregon Cross-Connection Inspector's Certificate - 1990

Oregon Water Distribution Operator's Certificate - Grade 2 - 1989.

Oregon Water Plant Operator's Certificate #2091 Grade 1 - 1987.

Oregon Wastewater System Operator's Certificate #3350 Grade OIT. 1987.

#### California

California Water Plant Operator's License #11792 Grade 3 (Senior Water Plant Operator). 1983.

California Multiple Class Contractor's License #372569, as follows:

- |    |      |      |                                    |
|----|------|------|------------------------------------|
| a. | 1979 | C-55 | General Water Treatment Contractor |
| b. | 1980 | C-36 | General Plumbing Contractor        |
| c. | 1981 | C-61 | General Pump/Machinery Contractor  |

#### Nevada

Nevada Contractor's License #017476, as follows:

- |    |      |      |                 |
|----|------|------|-----------------|
| a. | 1981 | C-30 | Water Treatment |
|----|------|------|-----------------|

## **AUTHORSHIP AND LIBRARY OF CONGRESS REGISTRATIONS**

### Published Technical Paper:

1984 "Removal of Nitrates from Contaminated Groundwater Supplies for Community Services Using Anion Ion Exchange Resins." Tucson, Arizona; WATER CONDITIONING & PURIFICATION (industry trade magazine).

### Published Author of:

1987 "Fresh Water Plant Operations" - Practice Questions, 2nd. Edition by Robert A. Funk. Library of Congress copyright TX-2149-437.

1987 "Mathematics for Fresh Water Plant Operators" - Practice Problems, 2nd. Edition by Robert A. Funk. Library of Congress copyright TX-2149-437.

Author of over 97 water-wastewater classroom work books, practice exams, study modules, math aides, and other items since 1988. Additional mathematics, distribution system, pump, and design of small water systems workshop manuals written in 1991-2010. Practice Examinations for water, wastewater distribution and collection system personnel written 1991 – 2010.

### Industry Publications:

1990 Author of several water treatment articles published quarterly for the Oregon Association of Water Utilities.

### Industry Associations:

1986 - 1994 National Environmental Training Association (N.E.T.A.), Phoenix, Arizona.

1988 - present American Water Works Association (A.W.W.A.)  
Scholarship Committee Chairman, Northwest Oregon Sub-Section Chapter (1990-1993).

## **EXPERIENCE**

### **Over 48 years of industry experience:**

**1988 - Present** **OCT Water Quality Academy ( Non-Profit);** North Highlands, Ca.  
Position: - **Director of the School / CEO; Professor**  
**Registered Professional Engineer**  
**Author - Publisher**  
Owner / manager of this accredited (via IACET) municipal water - wastewater school offers college level classes and courses in water treatment, water distribution, wastewater treatment, collections and supervisor-management programs. The school is operated on a full-time basis, year-round, and offers specialty certification in water quality, pump technology, and laboratory sciences. Publisher of self-study manuals via direct mail, online classes and both in-house and open-registration active classroom training.

Formed in 1988, OCT first operated as a part-time professional training organization within the utility industry offering seminars, workshop and certification review sessions for water and wastewater personnel.

After incorporation in 1991 as a for-profit training entity, the organization began offering training on a full-time basis offering regional classes (principally in California and Oregon) in water treatment, wastewater plant treatment, water distribution, wastewater collections, disinfection, pumps, and, industrial wastewater. The school gained accreditation in 2001 through the International Association for Continuing Education & Training ( IACET) in Washington, D.C. based on new State of California requirements.

The school became a 501 c(3) non-profit entity in California in 2007.

Additional school accreditation for the 45 unit AAS degree program are now pending.

- 1992 - 1993**      **Gibbs & Olson, Inc.:** Longview, Washington  
Position- **Staff Environmental Engineer**  
Wrote the draft of an O & M manual for the new anaerobic digesters at the City of Troutdale, Oregon, Funding application for a water system in Onalaska, Washington and the STP Evaluation for the City of Chehlais wastewater plant. Also developed the Cost Effective Analysis report outline for the City of Chehalis.
- 1991 - 1992**      **Lee Engineering, Inc.;** Oregon City, Oregon  
Position- **Environmental Engineering Specialist:**  
Responsibilities included studies and the design of water, wastewater, and pumping facilities, with emphasis upon evaluation, design of water, and funding of these facilities. Additional responsibilities included business and project development.
- 1988 - 1990**      **Russ Fetrow Engineering, Inc.;** Salem, Oregon  
Position- **Environmental Engineering Associate**  
Responsibilities included marketing, project and design engineering, facilities planning and operator training; developed and presented proposals (RFP's) and Statement of Qualifications (SOQ's); Worked with city administrators, council members; conducted water and wastewater studies for communities, developed rate structures, obtained municipal funding for client cities and districts to implement improvements in compliance with state and federal regulations; designed water and wastewater facilities up to 10.0 MGD; ability to design industrial water system and pollution abatement systems; designed and taught a 3 month water plant operator certification review class for operators preparing to take state examinations.
- 1986 - 1987**      **Clackamas Community College;** Oregon City, Oregon  
Position - **Part-time Instructor**  
Instructor of water, wastewater and apprenticeship subjects which stressed water quality and mathematics under Dean George Warren, Jr.
- 1980 - 1986**      **Westex Water Services, Inc.;** Stockton, California  
Position- **Founder, President and Design Engineer**  
Manufacturer of a full line of water and wastewater treatment equipment for small and moderate sized systems; Extensive knowledge of the equipment industry. Concurrently offered consulting services from 1982-1986 heavily involved in planning and design work.

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