ANNOUNCEMENT
THE DR. ROBERT W. OKEY 2018 SCHOLARSHIP
SPONSORED BY THE WATER ENVIRONMENT ASSOCIATION OF UTAH

The Dr. Robert W. Okey Scholarship

INTRODUCTION:

The Dr. Robert W. Okey Scholarship was established in honor of a man who dedicated over 50 years of service to the wastewater industry, the Water Environment Federation and the Water Environment Association of Utah (WEAU). Dr. Okey worked in the wastewater industry for many years before obtaining his PhD degree and becoming a professor at the University of Utah. Many people now working in the industry in Utah remember taking classes from him. He authored numerous papers and books and held patents covering various aspects of wastewater treatment. He is fondly remembered for his many unique papers and presentations at the annual conferences and for his participation in furthering the goals and objectives of WEAU.

CONDITIONS OF ELIGIBILITY:

The Water Environment Association of Utah will provide a $2000 grant to an undergraduate student enrolled in an environmental program, either in engineering or an applicable area of science or technology, at a Utah college or University. A qualified candidate may apply as often as desired for each year the scholarship is offered; however, a candidate can only receive one grant.

Each candidate must complete all of the essay questions assigned. A committee appointed by the WEAU Board will judge the essays. The essays must be received by Wednesday, October 24, 2018. The winner will receive their scholarship funds at the WEAU Mid-year Conference on November 13, 2018.

Completed essays shall be submitted to the WEAU/Scholarship Committee by the due date and may be sent either to the following address or electronically submitted to the email below.

WEAU/Scholarship Committee
Thomas A. Holstrom, P.E.
c/o Central Valley Water Reclamation Facility
800 West Central Valley Road
Salt Lake City, Utah  84119

Or email Thomas Holstrom at holstromt@cvwrf.org
The Dr. Robert W. Okey WEAU SCHOLARSHIP

The scholarship is provided to students enrolled in environmental programs either in engineering or an applicable area of science or technology. The grant will be for $2000.

The grant will be as follows:

One grant will be awarded for undergraduate students that have not reached their last semester of study. The criteria for entering are as follows:

Undergraduate Student:

1. Be a member of the WEAU student chapter. (It’s free, Go to www.wef.org to sign up)
2. Respond to essay questions.
3. Be enrolled for at least 9 credit hours.
4. Provide a statement of career goals and interests.

There are a number of questions to be addressed in the 2018 scholarship competition, as shown on the following page.

The following items must be followed for your scholarship submittal to be considered:

1. Each question listed must be answered.
2. Include a clear statement of each question and response that addresses each question.
3. Provide the sources of special or detailed information included in your response.
4. A full list of sources must be included in a reference section at the end of your submittal.

Undergraduate Student Scholarship Essay Questions

BIOLOGICAL NUTRIENT REMOVAL AND STRUVITE CONTROL

Passage of the Technology Based Phosphorus Effluent Limit (TBPEL) by the Utah Water Quality Board in December 2014 will result in the required upgrade of several mechanical wastewater treatment facilities within the state. Many of these wastewater treatment facilities currently employ primary clarification and anaerobic digestion of primary and waste secondary solids. Some of these treatment facilities will employ biological nutrient removal (BNR) to remove phosphorus from their effluent.
Phosphorus removed in a BNR process will readily re-solubilize in anaerobic digesters and, given adequate ammonia and magnesium constituents, can precipitate as struvite in pumps, piping, mixers, heat exchangers and other locations were turbulence drives off carbon dioxide and lowers the pH.

Please address the following questions:

1. What conditions lead to struvite formation, given a BNR process, and what strategies may be employed to minimize its occurrence?
2. Is forced precipitation of struvite a viable strategy for its control and, if so, where, within the BNR and related solids treatment processes, should forced precipitation occur?
3. In what form can struvite ultimately be captured and is there a market for its use?