

UNL will be hosting a visiting speaker on Friday, Feb. 3 from 11:00 to 11:50 am. Dr. LaPara will be speaking about his research on drinking water distribution systems and the influence of residual disinfectant on the microbial community in the system.

The public is welcome to attend this presentation. A full announcement is provided below. The presentation will be given in 111 SEC (Scott Engineering Center) in Lincoln and will be broadcast to 160 PKI in Omaha. If any member of the public would like to attend and would like to obtain a visitor parking permit, please contact me by Wednesday, Feb. 1 and I will facilitate obtaining the visitor parking permits.

- Bruce (bdvorak@unl.edu)

Environmental and Water Resources Engineering Graduate Seminar

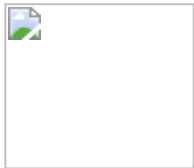
Friday, Feb. 3 11:00-11:50 am

111 SEC Link and 160 PKI

The Microbiome of Biofilms Growing on Water Distribution Mains

Timothy M. LaPara, Professor
Department of Civil, Environmental, and Geo- Engineering

Biofilms are pervasive on the surfaces on the mains used to distribute public water supplies. These biofilm communities are pertinent because they may accelerate iron corrosion, alter drinking water quality (e.g., taste, color, pH, and concentration of residual disinfectant), and serve as reservoirs of pathogens. The selective pressures of low nutrient levels and residual disinfectant in many distribution systems create unique conditions for microorganisms to live. In this study, the influence of residual disinfectant on biomass and microbial community composition in DWDS biofilms and tap water was investigated. Two distribution systems were selected because of their different residual disinfection strategies: a city in the U.S.A. that maintains a residual monochloramine concentration of $3.4 \pm 0.4 \text{ mg L}^{-1}$ (as Cl_2) and a city in Europe that has little or no residual (total chlorine $< 0.1 \text{ mg L}^{-1}$ as Cl_2). This research provides new insights into benefits and consequences of maintaining a low concentration of disinfectant in drinking water distribution systems.



Bruce Dvorak, Ph.D., P.E.

Professor of Civil Engineering and Biological Systems Engineering

Department of Civil Engineering

University of Nebraska-Lincoln

N120 SEC Link, Lincoln, NE 68588-06105