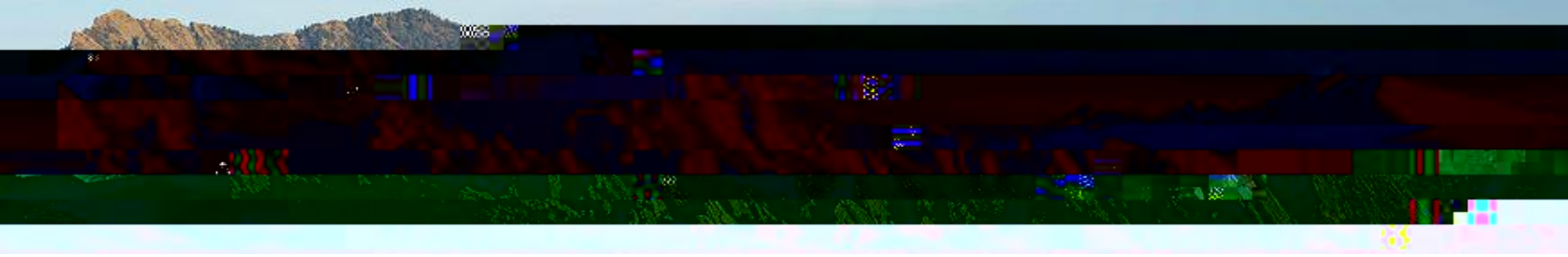

The quality of drinking water may change as it travels from the treatment plant through the drinking water distribution system (DWDS) to consumers' taps. A large area of concern is the growth of bacteria within these systems. Although many bacteria that grow within DWDSs are not harmful to human health, opportunistic pathogens (OPs), such as *Legionella pneumophila*, *Pseudomonas aeruginosa*, and *Mycobacterium avium*, can inhabit DWDSs and premise plumbing and cause infection in drinking water consumers. These OPs are the leading cause of waterborne disease outbreaks in higher income countries[1]. The United States currently requires drinking water suppliers to maintain a chemical disinfectant residual, such as chlorine or