

## Eawag Seminar Invitation

# The Coming Challenges of PFASs in Water and Soil: Implications for Human Exposure

**Speakers** **Prof Christopher P. Higgins, Ph.D., Civil and Environmental Engineering, Colorado School of Mines, USA**

**When** **September 30, 16:00 – 17:00, CET**

**Where** **Online via Zoom, contact [seminars@eawag.ch](mailto:seminars@eawag.ch) for access details.**

**Abstract** The challenges posed by the widespread contamination of soils and groundwater by poly- and perfluoroalkyl substances (PFASs) are immense. Despite growing concerns about human exposure to perfluorooctanoate (PFOA) and perfluorooctane sulfonate (PFOS), other PFASs, particularly those derived from aqueous film-forming foams (AFFFs) have garnered little attention. Recent work using high resolution mass spectrometry (HRMS) has revealed that there are dozens, if not hundreds, of additional PFASs that may be associated with AFFF-impacted sites. Importantly, many of these newly discovered PFASs have diverse chemical structures, including anionic, cationic, and zwitterionic structures. Some of these PFASs clearly remain bound strongly to soil, while other AFFF-derived PFASs, including transformation products, likely migrate into AFFF-impacted drinking water. In this seminar, the complexity of the challenges posed by the composition as well as the unique behaviors of PFASs will be presented and discussed. In addition, the implications of potential human exposures to these chemicals will be presented. Collectively, these data point to a need for a more comprehensive characterization of PFASs present in AFFF-impacted soils and waters, including their transformation and transport, and their potential impacts to human and ecological health.