Abatement of perfluorinated alkyl substances (PFASs) by granular activated carbon adsorption
Shane Snyder (UA), Minkyu Park (UA), Shimin Wu (UA)

Rationale:
• PFASs are chemically stable and their occurrence in the aquatic environment is persistent.
• Long-chain PFASs are hydrophobic, hence expected to be effectively attenuated by activated carbon.

Objectives:
• To assess the treatment efficacy of granular activated carbon (GAC) adsorption for the attenuation of PFASs.
• To simulate the GAC performance for PFAS abatement in a large system by a rapid small-scale column testing (RSSCT)

Approach:
• Based on similitude analysis, RSSCT based on the constant diffusivity model is designed to simulate a bigger-scale adsorption process (e.g., pilot scale)

Key Deliverables:
• Breakthrough characteristics of PFASs over bed volume.
• Provides insights into designing a large-scale adsorption for PFAS removal.

Project Dates: 2016-2018

Funding Source: Calgon Carbon