

Foam Filtration Future Research

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Long-term Goals

The largest challenges that remain to be dealt with are:

- Determining the toxicity of the foam leaching
- Developing a set of governing equations to guide the foam filter design
 - For forward filter:
 - Determining effect of stratification and various foam pore sizes on cleaning efficiency
 - Determining constraints for filter approach velocities
 - Develop an equation that may predict filter clogging time/ pressure in filter after time T given water influent NTU, PACI dose, filter geometry, flow rate, etc.
 - For backwash:
 - Find relationship between force and pore water velocity for various foam pore sizes
 - Develop relationship between pore water velocity and percent of foam cleaned
 - Find out how many backwash cycles various foams can take before tearing/breaking/failing