

# GAC Services

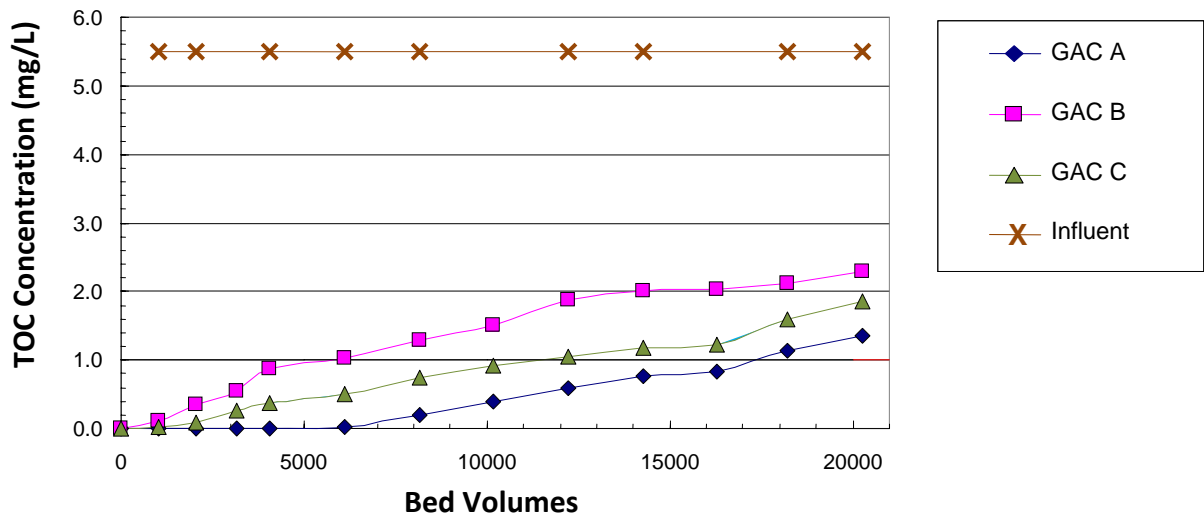
## GAC services EPS provides:

- Rapid Small Scale Column Testing (RSSCT)
- Breakthrough curves for compounds of interest (e.g., TOC, MIB, geosmin, MTBE, etc.)
- Determination of carbon usage rate and remaining filter/adsorber life
- Carbon hardness and abrasion
- Pore size distribution
- Carbon specifications:
  - Iodine number
  - Tannin value
  - Phenol value
  - BET surface area
  - Pore volume

## What is RSSCT?

Rapid Small Scale Column Tests (RSSCTs) scale down the conditions and dimensions of a full scale filter bed with GAC and allow continuous flow (using client-provided water) until breakthrough of the GAC. This test was initially developed for evaluating organic compound removal on activated carbon. Bench scale setup is derived using hydrodynamics and mass transport equations, and has been shown to be very effective in indicating accurate breakthrough curves for GAC. Our service allows you to compare the performance of several GACs for particular contaminants or predict the bed-life of a GAC in the full-scale facility. You can know your GAC usage rate and remaining filter/adsorber life in days, not months.

## GAC Breakthrough Curves



## Common Surface and Ground Water Contaminants

EPS uses RSSCTs to predict months of full scale data in days with very low water requirements. One particular area of concern in water treatment where RSSCTs can be useful is in the control of disinfection by-products (DBPs). EPS can not only compare the removal efficiencies of DBP precursors, but effluents from the columns can be dosed with chlorine and the formation of trihalomethanes (THMs) and haloacetic acids (HAAs) monitored over time. We can predict removal for any of the common contaminants listed to the right, or design a custom test for your facility.

- MIB, geosmin (tastes and odors)
- Natural Organic Matter (NOM)
- Disinfection By-Products (DBPs)
- Synthetic Organic Compounds (SOCs) (e.g. TCE, PCE)
- Perchlorate
- BTEX
- MTBE
- Color
- Pesticides