

Specification Sheet

FluxTracer® Flux Mapping Tools are easy-to-use devices that vertically delineate contaminant mass flux and groundwater velocity within an existing monitoring well to aid in site characterization and remedial designs. The FluxTracers consist of five separate two-foot-long stainless-steel screen canisters that are secured in series on a pre-measured central wire line equipped with a modified J-Plug well cap. FluxTracers are always pre-assembled, arriving at your site ready to deploy with no on-site construction required. The unique design provides joint-like flexibility between the closely stacked canisters to easily install and remove from a well.

Each FluxTracer canister is filled with granular activated carbon pre-loaded with biodegradable tracers. The tracers are composed of five different alcohols each having well-known partitioning characteristics with the activated carbon. As groundwater passively flows through a FluxTracer canister over the deployment period, the alcohol tracers are depleted from the activated carbon, with the net loss of the tracers directly correlating to the groundwater speed. At the same time, any contaminants present in the groundwater adsorb to the activated carbon during the deployment period. The total mass of contaminants accumulated on the activated carbon is then quantified and the contaminant mass flux is calculated.

A study consists of a FluxTracer installation into a well across a predetermined vertical interval of the saturated zone. The FluxTracer unit is typically in the well for two weeks and then retrieved. Once removed from the well, the FluxTracer devices are simply repackaged into the provided sleeves with zip ties and returned to the REGENESIS Lab for analysis. No on-site disassembly or sampling is required.

Upon receipt in the REGENESIS lab, each FluxTracer canister's contents will be sampled and analyzed at one-foot intervals. From those analyses, an accurate vertical profile of contaminant mass flux ($\text{mg}/\text{m}^2/\text{day}$) and groundwater Darcy flux (speed) (cm/day) is generated, and the results are provided in a report. The generated data provides remedial designers with important information on the flux zones within the aquifer, which ultimately aids to improve the results of remediation efforts.

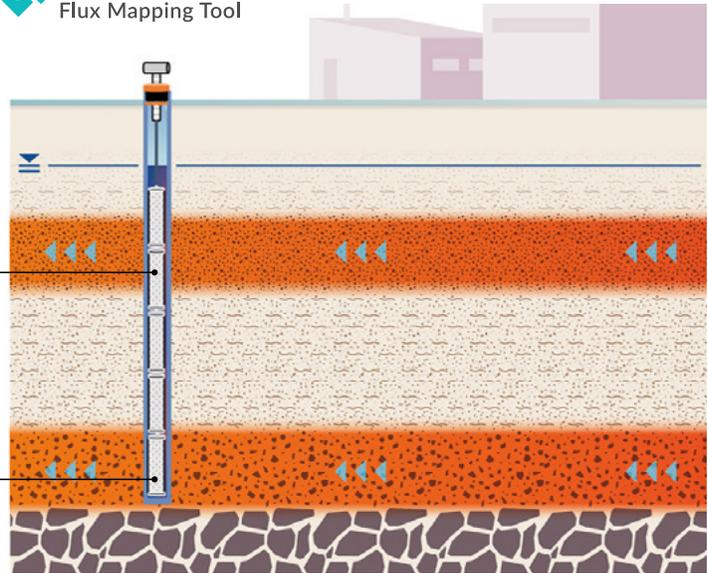
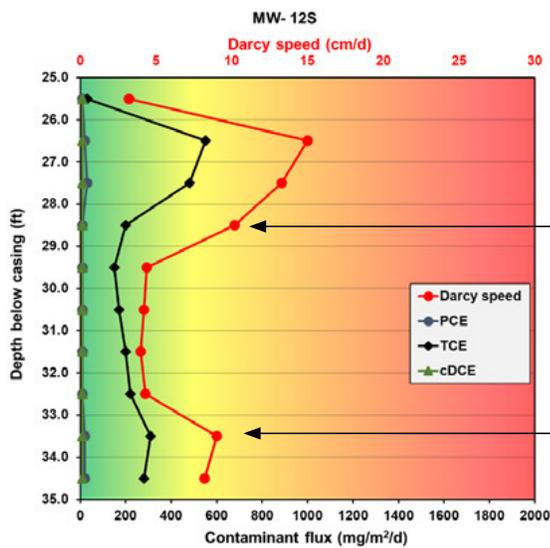


Illustration of a FluxTracer installed in a heterogeneous aquifer, and the ability to identify higher water and contaminant flux zones in an example data set.

Storage and Handling Guidelines

- Follow all installation and retrieval directions.
- Store the FluxTracers in the original shipping cooler until deployment. The cooler should be stored in a cool, dark location until deployment.
- Do not remove the FluxTracers from the packaging until the time of deployment.
- FluxTracers should be deployed within five days of receipt.
- Wear appropriate personal protective equipment when handling.

Applications

- REGENESIS currently only offers FluxTracer units for 2-inch diameter schedule 40 PVC wells.
- FluxTracers are currently only appropriate for determining contaminant flux of chlorinated VOCs: PCE, TCE, and cDCE.