

Escaped Trash on the Mill Creek (Southwest Ohio)

Background

In 1997, due to multiple stressors and sources of pollution, the national river conservation group American Rivers designated the Mill Creek as the most endangered urban river in North America. Since then, massive efforts have been underway to “clean up” the creek. Large industries are engaged in reducing their impact on pollution in the creek, but individuals can do their part too! This exercise can help you get involved.

[\[See additional history on our website at www.themillcreekalliance.org/history\]](http://www.themillcreekalliance.org/history)

Mill Creek Alliance (MCA) works tirelessly to clean up the creek. We engage volunteers to accomplish this effort, including the infamous group called the Mill Creek Yacht Club, a group of dedicated veteran boaters. They guide volunteers through stream cleanups on land and by canoe. Each year, volunteers pull tons of garbage out of the creek.

Recently, MCA got involved with [Osprey Initiative](#), a company from Alabama that installs tailor made trash collection devices called “Litter Gitters” in waterways, to trap, remove, and assess trash on the Mill Creek. To do this, after the device is installed across the creek, a team of workers visits the site after every major rain event and removes the trash collected. They then conduct a thorough study of exactly what type of trash was found. They use a tool developed by the US EPA called “[ETAP](#)”-[Escaped Trash Assessment Protocol](#). (View the [complete US EPA reference guide](#) for a thorough explanation.)

Exercise

Using the ETAP tool helps us learn about exactly what trash is ending up polluting the waterways, where it may have come from, how long it has been in the water, and to consider ways to reduce it. As with any good science experiment, you begin with a question followed by a hypothesis. No research required, just curiosity.

1. Ask yourself, what do you think is the primary trash in your neighborhood? Make a prediction of the top five types of trash. What is your theory as to why?
2. Next, get some tools together to test your hypothesis, conduct an experiment. Use the ETAP protocol to evaluate the trash you collect and evaluate your findings.
 - a. Collect a sample set of garbage. Pick up every piece of trash in a specific area. Weigh this garbage.
 - b. Sort the trash by the primary categories on the data card (paper, glass, metal, plastic, other)
 - c. Further sort each pile by sub categories (i.e. PAPER: cardboard, bags, newspaper, cups, food packaging, receipts, other)
 - d. Further sort each of these piles by item condition (intact, partially intact, degraded). Record notes on this subcategory. (Visit our website to watch a video of this sorting process in action.)
 - e. Weigh this sub group and record findings
3. See if the results align with your hypothesis.
4. Use your data to advocate for change!! Who can you contact that might have some control over this finding? How might they change their practices for the better?
5. Finally, send MCA a picture of your exercise/work and communicate your results and your ideas for implementing change. (Via email at info@themillcreekalliance.org or Facebook @millcreekalliance)

The Scientific Method as an Ongoing Process

