



# ADOPT-A-STREAM PROGRAM MANUAL

ALICE FERGUSON FOUNDATION  
**CHARLES COUNTY PROGRAM**



## Acknowledgments

Our waterways remain a life source for community. A diverse, cross sector cohort, including community members, business leaders, elected officials, non-profit partners, and municipality staff, are working together for a healthy community.

The Charles County Adopt-A-Stream program was created through funding from the Chesapeake Bay Trust. The program is designed and implemented to incorporate the mission of the Alice Ferguson Foundation, which is to connect people to the natural world, sustainable agricultural practices and the cultural heritage of their local watershed through education, stewardship and advocacy.



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The Adopt-A-Stream program connects people to their local watershed through stewardship. Participants will lead a cleanup and monitor what is found two times a year. The data monitoring provides valuable baseline and comparative data that contributes to public policy and education. We also ask participants to help identify any needed improvements for streams, including access issues, vandalism, or unusual wildlife patterns.

The Potomac River, our Nations River, is a river worth protecting. The Potomac River flows 338 miles, from the Allegheny Mountains to the mouth of the Chesapeake Bay, ultimately joining the Atlantic Ocean. An area of land (including its waterways) flowing into a larger waterway is called a watershed. The Potomac River watershed includes parts of Maryland, Virginia, West Virginia, Pennsylvania and the entire District of Columbia. There are ten major sub watersheds of the Potomac River in Charles County, Maryland: the Gilbert Swamp, Mattawoman Creek, Nanjemoy Creek, Patuxent River Lower, Port Tobacco River, Potomac River L Tidal, Potomac River M Tidal, Potomac River U Tidal, Wicomico River, Zekiah River.

Fun, healthy, and educational adventures are among the many benefits waterways offer communities. The Potomac River provides important habitat for abundance of life underwater and throughout the watershed (including us!). Eighty percent of people in the watershed depend on the river for the water we drink (and cook with, bathe with, etc). It is imperative we keep the Potomac River and its tributaries healthy. Clean land and safe waters create healthy lives and strong communities.

We hope you will take the opportunity to enjoy the tributaries that sustain us. We look forward to recognizing your successes at our events and online. Your efforts are part of a larger movement, a growing community of clean water advocates.

We invite you to Adopt-A-Stream and become stewards for this space.

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Proper waste management can provide clean land, safe waters, and healthy lives for a community. Improper waste management can negatively impact a community.

Litter:

- attracts rats and other vermin that carry harmful diseases
- can leach chemicals into our drinking water
- costs jurisdictions significant amounts of money on cleanup efforts
- negatively affects local business and tourism
- is deadly to wildlife

Piece by piece, litter adds up and makes the places we go everyday unsafe and unhealthy.



*Litter Prevention Campaign signage in a neighborhood garden. When posted, the litter campaign can decrease littering behavior by up to 30%.*



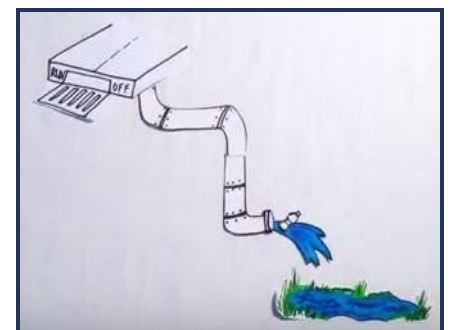
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Every action we do on land affects the water. Where does the plastic bag blowing down the street go? What happens to the debris from an overflowing trash can? It is estimated that 80% of trash in the water comes from land-based sources. So how does trash get from land to the water?

Littering: We define litter as any item that is intentionally or unintentionally discarded into the environment, with no intention of proper waste management. It's solid waste in the wrong place. This includes a water bottle aimed for trash bin but missed, the receipt that flew out of a backpack, or a to-go food container thrown out of a car window.

Stormwater: In each sewer system, stormwater runoff containing trash can discharge into our local waterways at various outflow points around the city. In the combined sewer systems, that stormwater is also mixed with sewage in heavy rain events.

Illegal Dumping: Illegal dumping is the unlawful discard of bulk trash such as tires, large appliances, or multiple bags of trash.



*Check out our YouTube video STOP (motion) MICROPLASTICS to see the storyline behind this image.*

Shower to Stream: Some health care products, like liquid soap and toothpaste, contain tiny plastics beads called microbeads. When these health care products go down the drain, the microbeads pass through sewage treatment plants and directly enter waterways. The United States (and other countries) banned the use of microbeads in products.

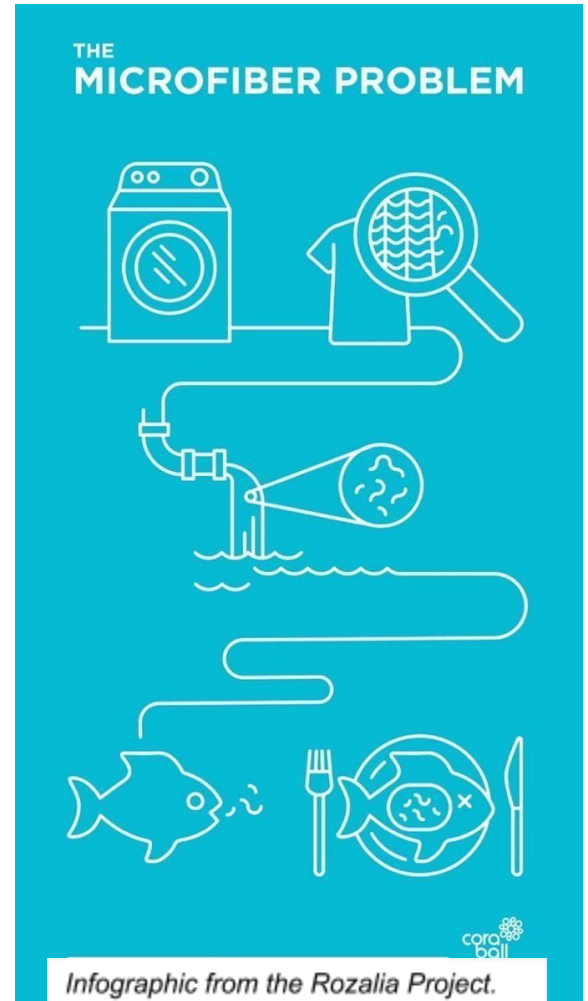
Washing Machine: Every time we wash our laundry, tiny fibers are washing off of our clothing and going down the drain. Similar to microbeads, the wastewater treatment plants are not equipped to catch these tiny (5 micron or less) microfibers and they end up washing into our public waterways. These fibers are commonly made up of plastic (think nylon and polyester). Even if our laundry is cotton, wool, etc., microfibers carry dyes and pollutants that are harmful.

At Sea: Derelict fishing gear and waste from cargo ships are additional ways our waterbodies are polluted.

It Just Happens: Even at our best effort in responsible waste management, there is still a chance trash can enter the water. Think about the journey of throwing trash 'away'.

Can → Curb → Truck → Landfill or Materials Recovery Facility → Landfill or Incinerator

At any step in the process, wind, rain, or human error can cause the item to get back into the natural environment, either by entering the water body directly or by way of stormwater and storm drains.



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Once trash reaches the water, it is very difficult to retrieve. Currents carry trash through our local streams, where it ultimately can end up in the ocean. Once trash is in the ocean, currents continue to carry this marine debris across the globe, where large concentrations accumulate in the five ocean gyres.

The majority of trash is comprised of plastic, a petroleum-based material. Plastic does not biodegrade, meaning it will never completely break down and decompose. Plastic photodegrades, meaning it breaks down into smaller pieces by the action of sunlight.

Sun, wind, and waves all contribute to plastic breaking down into smaller pieces called microplastics. Microplastics are less than 5 mm in size.

Even though microplastics are tiny, they are big enough to adsorb persistent organic pollutants (POP's) like DDT (dichlorodiphenyltrichloroethane) and PCB (polychlorinated biphenyl) that are harmful to human health and the environment. When aquatic species consume microplastics, toxic chemicals bioaccumulate up the food chain.

Generally, when fish eat plastic it ends up in the gut. Although it's uncommon for humans to eat the fish gut, there is concern as to the potential for adsorbed chemicals to transfer to the muscle tissues and parts we do eat. For shellfish, we eat the entire creature, so yes, we are eating plastic.

Toxic chemicals leach out of plastic and are found in the blood and tissue of nearly all of us. Exposure to them is linked to cancers, birth defects, impaired immunity, endocrine disruption and other ailments. (Source: » Two broad classes of plastic-related chemicals are of critical concern for human health—bisphenol-A or BPA, and additives used in the synthesis of plastics, which are known as phthalates. Source: "Perils of Plastics: Risks to Human Health and the Environment," Arizona State University Biodesign Institute 18 March 2010)

Even before trash begins to break down, it is deadly to aquatic life. Entanglement can cause suffocation. Ingestion can falsely fill a creature's belly, causing a change in feeding behavior that may lead to starvation.

Over 260 species, including invertebrates, turtles, fish, seabirds and mammals, have been reported to ingest or become entangled in plastic debris, resulting in impaired movement and feeding, reduced reproductive output, lacerations, ulcers and death. (Source: Thompson, Richard C.; Moore, Charles J.; vom Saal, Frederick S.; Swan, Shanna H. "Plastics, the Environment and Human Health: Current Consensus and Future Trends," *Of [ \* 304/82 ] &^* • 14 June 2009)

New reports continue to link our daily consumption habits to the fate of our waterways.

According to the Ellen MacArthur Foundation report launched at the World Economic Forum, new plastics will consume 20% of all oil production within 35 years, up from an estimated 5% today.

(<https://www.ellenmacarthurfoundation.org/publications/the-new-plastics-economy-rethinking-the-future-of-plastics>)

This same study reports there could be more plastic than fish (by weight) in the ocean by 2050.

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- Adopt a stream!
- Organize community cleanups.
- Lead by example: Pick up litter and prevent littering.
- Talk to your friends and neighbors about your watershed.
- Advocate for better waste management systems in public spaces.
- Reduce waste. When possible, opt for reusable items instead of single use disposables.
- Report illegal dumping/litterers: contact the non-emergency line for the Charles County Sheriff's Office, 301-932-2222.
- Use your creative skillset to plug into the movement.

Plastic pollution is a global concern that is increasingly one of the biggest threats to aquatic ecosystems and the water we drink. Your participation in the Adopt-A-Stream

program makes a difference!



*Volunteers participate at a cleanup.*



## Adopt-A-Stream Program

### Key Information

The Adopt-A-Stream program goes beyond the immediate benefits of a trash cleanup. The monitoring supports significant data contributions to legislation, public education, and Environmental Protection Agency (EPA) mandates.

**Legislation:** Data contributions from community cleanups contributed to the passing of these two bills.

**EPA Mandates:** The monitoring component of the Adopt-A-Stream is a mirror of the already existing Metropolitan Washington Council of Governments (MWCOC) in-stream monitoring. MWCOC counts, records, and submits data into 22 categories. These categories provide insight on the most common trash items found.



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Adopt-A-Stream participants will employ the same tributary trash surveying field check list that has been used by MWCOC in Charles County, Maryland, Montgomery County, Maryland, Prince George's County, Maryland, and the District of Columbia with the addition of a straw category.

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The instream baseline trash surveys for all sites will be performed twice per year (i.e., late spring/summer and late fall).

Monitoring will only occur on days that have not had significant (greater than 0.2 inches) precipitation within the previous 48 hours. Clear, baseflow conditions are crucial for allowing surveyors to see and identify all trash items in the stream.

Photographic documentation of representative conditions (e.g. general stream channel condition, number of trash 'strainers', storm drain outfalls present, etc.) will occur at every survey. See example image of a strainer in Figure 1.

Each complete biannual monitoring round will consist of a count survey yielding two surveys per year.

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For safety concerns, there will always be at least 2 people present.

Each count survey will begin at the downstream end.

Surveyors will walk upstream. Every trash item within the bankfull width for the entire 500 foot length will be identified and recorded on the Adopt-A-Stream Trash Survey. See example image of bankfull in Figure 2.

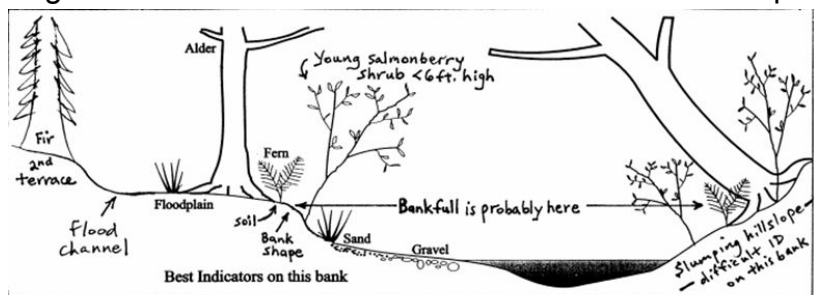
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Trash pick-up will occur after the count survey has been conducted.

The Site Leader is responsible for providing a safety talk, making sure participants sign in, and arranging for proper trash disposal.

Number of bags of trash and number of volunteers are to be recorded.

All data will be entered on the Google Form and submitted within 1 week of the cleanup.



Typical bankfull ID situation, adapted from Pleus and Schuett-Hames, 1998.

Figure 1: (Left) The fallen trees act as a natural strainer, allowing water to pass through but not litter debris.

Figure 2: (Above) Drawing example of a bankfull width in a stream.

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Please follow your local government and CDC recommendations before planning a cleanup event. See the CDC's website for more information – [Considerations for Events and Gatherings](#)

Please check [Charles County's Status](#) page before organizing a cleanup or group event

If you are planning a cleanup event, please adhere to these guidelines recommended by the Center for Disease Control (CDC) for the safety of our community.

- Wear a mask in public spaces.
- Practice Social Distancing - Volunteers should stay at least 6 feet away from people they do not live with.
- Follow group gathering numbers based on your local jurisdiction (i.e. no more than 10 people per group, etc.)
  - ~ We recommend that volunteers do cleanups with family and friends they live with.
- If soap and water are not available provide hand sanitizer at cleanup events for volunteers.
- Have volunteers RSVP for cleanups so you are able to keep track of the number attendees (use portals like Eventbrite, Facebook, etc.)
  - ~ Before the cleanup day have the RSVP'd volunteers sign waivers virtually
    - [Alice Ferguson Foundation Online Waiver](#)
  - ~ Have a bit.ly or barcode for volunteers to use to access waivers online to sign on the day of the event if they did not sign prior. Print waivers just in case volunteers cannot access online waiver and have them take a picture and send it to you. We strongly encourage volunteers to sign waivers prior to the event.
- Provide a contactless supply pick up for volunteers and provide safety briefings to small socially distant volunteers before sending them out to cleanup.
- Before even organizing a cleanup please make sure that you have a way to dispose of the trash after your cleanup.
  - ~ More information can be found below and who you need to contact can be found on our [Cleanup Leader page](#).
- Volunteers should not participate if, in the last two weeks, they have (a) experienced any cold or flu-like symptoms (to include fever, cough, sore throat, respiratory illness, difficulty breathing), (b) had close contact with or cared for someone diagnosed with COVID-19, or (c) been in, or been in close contact with someone who has been in an area that is currently under a shelter in place order or currently under a US travel ban restriction. Event leaders will remind participants of this as part of their safety talk at the start of the event.

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A cleanup can be at a park, city block, shoreline, or in the water. For the Adopt-A-Stream program, all locations will be waterways. AFF and Charles County Government will assist in site selection considering the following criteria:

Is the site littered? There should be enough trash to keep volunteers engaged for the duration of the cleanup.

Is the litter accessible? Trash in a thick patch of thorny vegetation or on a steep river bank may be more difficult to reach and require proper tools and clothing.

Is the site location accessible? Consider how volunteers will transport to the site, either via foot, metro, or driving and parking.

All Adopt-A-Stream leaders must schedule a site visit with AFF to identify & mark the survey length and answer questions in the field.

Adopt-A-Stream leaders must provide AFF with the cleanup date at least one month in advance to allow for gaining approval from landowners.

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Is there enough space to practice social distancing?

Is there access to a bathroom with soap and water?

Your location should be a place in your community that you care about. Take pride in your cleanup site!

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Once you choose a stream you want to adopt, you will need to get permission from the landowner to host a cleanup event. Your site may be public land, private property, or part of a national park. Alice Ferguson Foundation can help connect you with land owners to gain permission for cleanup events.

Land permission promotes your safety

It also offers site specific information, such as any construction projects, safety hazards, or wildlife and plant details.

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Is the Park or Jurisdiction open?

What are their recommendations in regard to COVID-19?

~ See your local jurisdictions recommendations.

Transparent communication is an important step in this process. It's usually the landowner who can provide the trash (and recycling) pick up.

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So you've collected the data and picked up the trash and litter, now what to do with it? It is the responsibility of the Site Leader to arrange for trash and/or recycling disposal. There are a few ways to take out the trash:

If you have the ability dispose of the collected trash on your refuse collection date or take it to the local landfill

Work with the land owner (city, National Park Service (NPS), Department of Public Works (DPW), etc). Ask them the best place to leave the bags. AFF will help facilitate pick-up.

Ask a local business, school, or faith center if you can use their dumpster.

Divide the cleanup bags among volunteers and put the trash & recyclables out with curbside pickup.

Call the local landfill and ask for a dumping waiver. They may be able to provide you with a waived fee so you can properly dispose of the refuse for free at your local facility.

Have a dumpster on site. This is good for sites expecting to have 50+ bags of trash. Check in with your city first, and if they cannot provide a dumpster you can ask your local waste hauler to donate a dumpster for the day, including drop off and pick up.

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Is the County or Park staff able to remove the trash or will volunteers need to take trash home for removal?

Remember to check with your local Jurisdiction and Park for regulations in regards to COVID-19 pandemic.

Thank you for ensuring all trash is securely bagged and in the correct place for pickup!

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The Trash Network is an online platform for the public to easily find cleanup events. This is a great tool for regional education, policy, regulation, and press supporting a Trash Free Potomac Watershed.

Here's how it works:

Go to [TrashNetwork.FergusonFoundation.org](https://TrashNetwork.FergusonFoundation.org)

Create a login

Create a Site

- ~ This is the location.
- ~ Remember to use GPS coordinates!

Create an Event

- ~ This includes the date and time of your cleanup event

Share your event link with your community!

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During the pandemic we encourage all Cleanup Leaders to have volunteers register through a free online platform (Example – Eventbrite, Google Forms, etc) and allow only a certain number of attendees.

- ~ Before the cleanup event, send volunteers waivers to sign online, or to print and send to you via email or fax to avoid contact on the day of the event.
  - [Alice Ferguson Foundation Online Waiver](#)

Data from cleanups throughout the region is uploaded to the Trash Network and synced with our Fieldscope map to further interpret data. We publicly share all cleanup data with the global marine debris community.

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Community cleanups are most successful when the Site Leader shares the event with their networks. Consider posting your Trash Network event link and/or a flyer at the following locations:

- Community Center
- Online Listservs (ie: Volunteer Match, Idealist)
- Alice Ferguson Foundation's PotomacCleanup.org
- Schools (many students need Student Service Learning hours!)
- Worship House
- Neighborhood Listservs (ie: Nextdoor)
- Local paper or radio
- Social Media (Facebook, Twitter, Instagram)

Cleanups are a great opportunity for community engagement!  
Get outside and enjoy your local watershed.  
Meet and greet old friends and new neighbors  
Intergenerational event

Everyone has a relationship with trash. Cleanups can serve as a transformational experience for a volunteer who otherwise would not consider themselves an environmental steward.

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Before the volunteers arrive for the cleanup:

Collect and record data using the Adopt-A-Stream Trash Survey

Prepare supplies (bags and gloves)

Have waivers and pens ready for participants to sign in

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Have the list of your registered attendees ready and whether they have signed waivers

If volunteers have not yet signed waivers bring paper waivers with you and have the volunteers take a picture of the waiver to send to you or a link to the waiver for them to sign digitally.

Welcome Introduction:

Thank volunteers for being here

Introduce yourself and let volunteers know that this event is part of a larger effort.

Share why you care about trash free waters. Examples:

This is the water we drink. 80% of residents in the Potomac watershed source their drinking water from the Potomac River.

Litter is harmful to local wildlife and ocean species.

Trash free waters and communities provide clean land, safe waters, and healthy lives.

Safety Talk **7 CJ-8!%`FYUHX`GUZYm**

Do not pick up anything that you are uncomfortable touching

Do use a BIOHAZARD container for certain items. See the safety guidelines in the appendix.

Do not uncap bottles to drain liquid. Leave the cap on and throw it in the trash. The liquid could be dangerous or unsanitary.

There are some items, like weapons and homeless encampments that you should not remove. Review the safety guidelines.

Go over social distancing, mask requirements, and COVID-19 related safety

Logistics

Distribute gloves and trash bags.

Have participants sort trash (yellow bags) and recycling (blue bags) as they pick up items. Think of blue bags for bottles. Generally the blue recycling bag is largely filled with plastic beverage bottles.

Identify the boundaries to be cleaned up. The trash cleanup may extend beyond the monitoring boundary.

Declare a time and place for everyone to be back

Mark the location for the bags to be placed for removal

## Wrap Up

Share data among the group (and record on your trash survey)

Collect gloves to be washed and reused

Thank volunteers for coming and share where they can get involved.

## Data

Data is an integral part of the cleanup experience. The information helps environmental agencies track progress toward removing trash from the region's waterways and informs policy to further regulate the sources of trash

### To Record Data

Use the Adopt-A-Stream Trash Survey

### To Report Data

Complete the Google Form for the Adopt-A-Stream Trash Survey

You can also fax or physically return the Trash Survey sheet.

Quantitative data contributes to legislation, increases public awareness, and justifies the mandate to clean-up our rivers. Thank you for contributing to the data!

## Local Activities

We live in a wonderfully unique part of the world. Our creeks, streams, and rivers, are never too far from home. Have you enjoyed your waterways yet?

Picnic at the Park

Paddle (kayak, canoe, stand up paddle board)

Gone Fishing

Walk and Bike Trails

River Boat tour

There are many local organizations working hard to provide free activities near or on the water. Follow us on social media to learn more and plan your next adventure.