ECOLOGY ACTION CENTER NEWS

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Illinois Solar for All

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Free Trees in West Bloomington

EAC is providing free trees to income eligible West Bloomington residents through our West Bloomington Free Tree program!

Too often, historically lower income and black and brown neighborhoods have the least amount of green space and tree canopy, and that is no different here in the twin cities. According to environmental and socio-economic indexes from the US EPA EJScreen tool, West Bloomington has disproportionate rates of exposure to environmental pollution. We know that a lack of trees contributes to reduced air quality, and in using American Forest's Tree Equity Score map, we can see that many sections of West Bloomington have as little as 11% tree canopy coverage.

In addition to improving air quality, the presence of mature shading trees in a neighborhood can cool your street up to 7 degrees, which makes a big difference in the summer months. Higher tree density can mean lower electricity bills, increased property values, and is linked to better physical and mental health for residents. In prioritizing tree planting where it's needed most, we can shift the scales and help Bloomington-Normal to be a better place to live for everyone.

Here's how we're making it easy:

No cost barrier: 5 year old sapling trees can be $100-$150. We're covering this cost for applicants who meet the below 80% Area Median Income (AMI) requirement.

Informed decision: We come out and assess your property and work with you to find the perfect location and species for your home. We also initiate contacting utility companies to avoid any conflicts.

High quality species: All of our tree species are native to our area and should endure changing temperatures. Our inventory includes mighty long-lived oaks, flowering trees, and edible fruit trees like PawPaw and Serviceberry.

Done right: We bring tools, your tree, and expertise! We'll plant the tree with you, stake it, and provide support. Then it's up to you to water and nurture your tree. If you're interested, please complete a Free Tree Request Form on our website.

Plastic Resin Codes and Why We Don't Use Them for Recycling

Have you ever wondered what those numbers inside the chasing arrows symbol on the bottom of most plastic containers stand for? Many of us mistakenly use these numbers to decide if an item is recyclable or not, but that's not actually what they stand for.

Resin identification codes (RICs) were developed in 1988 by the Society of Plastics Industry (SPI) to identify which type of resin was used to make different plastic products. Resin codes 1-6 mean that the plastic is made from one of six specific types of plastics;

1 – poly ethylene terephthalate (drink bottles, furniture, carpet, etc.),

2 – high density polyethylene (bottles, grocery bags, milk jugs, etc.),

3 – poly vinyl chloride (pipe, siding, flooring, etc.),

4 – low density polyethylene (plastic bags, tubing, six pack rings, etc.),

5 – polypropylene (auto parts, food containers, etc.),

6 – polystyrene (Styrofoam products, clamshell containers, etc.).

Number 7 means the packaging is made of a different type of resin that's not 1-6 or a mixture of resins.

While the intent was to make it easier for consumers and recyclers to sort the different types of plastic, the truth is that very few of these plastic items are actually recyclable. In fact, some studies suggest that as little as 9% of plastics are recycled. The RICs have even been updated to a solid triangle with a bold outline to limit confusion and the association with recycling.

Plastic cannot be recycled indefinitely like metal or glass and degrades each time it's processed. Due to inconsistent and unreliable end markets, poor quality materials, and fluctuating oil prices that affect the price of plastic, it can often be cheaper to buy virgin plastic than recycled plastic. Therefore, it's not cost-effective for many recycling companies to even process plastics.

In an effort to make plastic recycling easier, the Ecology Action Center recommends that you ask yourself if the plastic item is one of four things. Is it a bottle, tub, jug, or jar? If so, in the recycle it goes! Common examples include water or soda bottles, sour cream or butter tubs, milk jugs, and plastic salsa or peanut jars.

Some common plastic items that **are not** accepted in our local recycling program include to-go drink cups, fruit and berry containers, salad containers, clamshell/to-go containers and toothpaste tubes. If in doubt, throw it out.

While plastic grocery bags **cannot** go in our curbside recycling program, they can be dropped off, along with additional soft plastics like newspaper bags and bubble wrap, at most grocery stores. Clean and empty plastic jugs can also be donated to the Midwest Food Bank where they will be refilled and given to families in need.

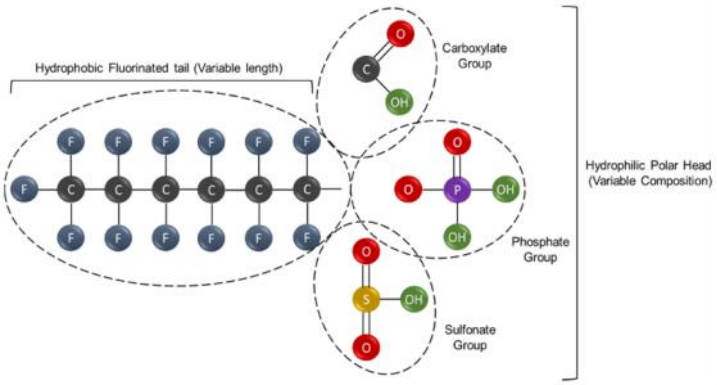
Meet Tess, our new Tree Coordinator!

Hi! My name is Tess Wallace, and I am the new Tree Coordinator at the Ecology Action Center. I am so happy to be adding to the amazing work that is being done here at EAC.

I grew up in Watseka, IL and went to college at Columbia College Chicago. I then spent 6 years in Boise, ID doing conservation advocacy and voter outreach work at Conservation Voters for Idaho. My work at CVI included education and promotion of the Boise Climate Action Roadmap, helping dozens of green candidates get elected to office, pushing utilities and counties to adopt clean energy commitments, and activating voters to protect public lands and clean water. In that time I learned so much about the challenges we face and most importantly what connects people - we all care about our communities, the health of our families, and having green space around us. We all have a responsibility to take care of the environment and the people around us, and we all have something to contribute. I look forward to doing my part here in Bloomington-Normal by increasing the tree canopy and helping trees do what they do best - making the world a better place. I hope to see you out there!

PFAS: The Forever Chemicals

Whether from news outlets, social media influencers, or late-night hosts many people are familiar with the concept of forever chemicals in our environment. However, understanding what they are and their impact on our bodies and the environment is less common. Forever chemicals or per- and polyfluoroalkyl substances (PFAS) are a class of chemicals which all contain a strong carbon-fluorine bond, making these chemicals difficult to break down in the environment.



PFAS are resistant to grease, oil, water, and heat so they are commonly found in stain- and water-resistant fabrics, cleaning products, paints, and fire-fighting foam. They are also used in cookware, food packaging, and food processing equipment[1]. Brands most recognizable for utilizing PFAS include Teflon and Gore-Tex, however most people have many products in their home which contain these chemicals such as non-stick pans and waterproof clothing.

Since these chemicals take so long to degrade, their presence has been found in water, air, fish, and soil in varying areas in the world, including the U.S.[2] This is very concerning as these chemicals are mobile in soil and ground water and are shown to bioaccumulate[3]. Studies have shown that exposure to PFAS in the environment may be linked to harmful health effects in both humans and animals[2]. People are most likely to be exposed to PFAS by consuming contaminated food or water, utilizing products made with PFAS, or breathing air containing PFAS[3]. The National Institute of Environmental Health Sciences cite research linking some PFAS to altering metabolism and body weight regulation, increasing the risk of cancer, reducing the ability of the immune system to fight infections, and decreasing bone mineral density[4]. Additionally, PFAS have been shown to increase cholesterol levels, increase the risk of thyroid disease, decrease the likelihood of women becoming pregnant, and decrease vaccine response in children[5].

PFAS do not have a taste, color, or odor in drinking water and can only be confirmed to be present via analytical testing at approved labs[3]. Previously, the United States did not have federal ruling limiting the amount of PFAS found in drinking water. However, in April 2024 the EPA announced the final National Primary Drinking Water Regulation for six different PFAS (see Figure 2). These regulations would cap PFOA and PFOS in drinking water to be 4.0 parts per trillion (ppt) and 10 ppt for PFHxS, PFNAm and GenX chemicals (HFPO-DA). It additionally regulates four other PFAS (PFNA, PFHxS, PFNA, HFPO-DA, and PFBS) as a mixture due their frequency to occur in water together. Parts per trillion is utilized for enforcement as it is the lowest level at which PFAS can be reliably measured. To contextualize, 1 ppt is equal to a single drop of water in 20 Olympic-sized swimming pools.

Compound	Final MCLG	Final MCL (enforceable levels)
PFOA	Zero	4.0 parts per trillion (ppt) (also expressed as ng/L)
PFOS	Zero	4.0 ppt
PFHxS	10 ppt	10 ppt
PFNA	10 ppt	10 ppt
HFPO-DA (commonly known as GenX Chemicals)	10 ppt	10 ppt
Mixtures containing two or more of PFHxS, PFNA, HFPO-DA, and PFBS	1 (unitless) Hazard Index	1 (unitless) Hazard Index

Figure 2: EPA PFAS Regulations[6]. The compound refers to the specific PFAS chemical. MCLG stands for maximum contaminant level goal. If the analytical result/average level detected is below the MCLG there is no known or expected risk to your health. If it is detected above the Final MCL (Maximum Contaminant Level) then it would be in violation of EPA regulations[10]. A Hazardous Index is a tool used by the EPA to understand health risks from chemical mixtures. It is made up of a sum of fractions where each fraction compares the level of each PFAS chemical measured in the water to the highest level determined not to have risk of health effects. If the annual average hazardous index is greater than 1.0 it would be in violation[11].

This regulation requires public water systems to monitor for and inform residents of these PFAS in drinking water, implement solutions that reduce these PFAS, and notify the public if they are ever in violation[6]. The Town of Normal in their 2023 water quality report (See Figure 3) ran a test for 18 possible PFAS and detected a level of 2.2 ppt for PFBS stating that they will continue to monitor PFAS in their quarterly sampling. The City of Bloomington ran testing for PFBA in 2023 and found an average of 1.7 ppt (See Figure 4). For private well users who are concerned with PFAS in drinking water, contact the Illinois Department of Public Health. Many concerned about PFAS have turned to bottled water thinking it to be better. However, bottled water is regulated by the FDA which has not established standards for PFAS in bottled water at this time[3].

PFAS Analyte	Acronym	Minimum Reporting Level (ppt)	Draft Guidance Level (ppt)	Analytical Result (ppt)
Perfluorobutanesulfonic acid	PFBS	2	140,000	2.2
Perfluorohexanesulfonic acid	PFHxS	2	140	No Detect
Perfluorononanoic acid	PFNA	2	21	No Detect
Perfluorooctanesulfonic acid	PFOS	2	14	No Detect
Perfluorooctanoic acid	PFOA	2	2	No Detect
Hexafluoropropylene oxide dimer acid	HFPO-DA	2	560	No Detect
N-ethyl perfluorooctanesulfonamidoacetic acid	NEtFOSAA	2	----a	No Detect
N-methyl perfluorooctanesulfonamidoacetic acid	NMeFOSAA	2	----a	No Detect
Perfluorodecanoic acid	PFDA	2	----a	No Detect
Perfluorododecanoic acid	PFDoA	2	----a	No Detect
Perfluoroheptanoic acid	PFHpA	2	----a	No Detect
Perfluorohexanoic acid	PFHxA	2	560,000	No Detect
Perfluorotetradecanoic acid	PFTA	2	----a	No Detect
Perfluorotridecanoic acid	PFTrDA	2	----a	No Detect
Perfluoroundecanoic acid	PFUnA	2	----a	No Detect
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	11Cl-PF3OUdS	2	----a	No Detect
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid	9Cl-PF3ONS	2	----a	No Detect
4,8-dioxa-3H-perfluorononanoic acid	ADONA	2	----a	No Detect

a Toxicity criteria is not available to calculate a Draft Guidance Level.

Figure 3: Town of Normal 2023 PFAS testing results[8]. PFBS is a regulated PFAS chemical when in combination with one or more of the regulated PFAS. According to the EPA, the highest level of PFBS determined not to have risk of health effects would be 2,000ppt[11].

2023 Detected Unregulated Contaminants

Contaminant	Year Sampled	Units	MCLG	MCL	Health Based Guidance Level	Average Level Detected	Range of Detections
Perfluorobutanoic acid (PFBA)	2023	ppb	NA	NA	NA	0.0017	ND – 0.0052
	Likely source of Contamination - Per-or polyfluoroalkyl substances (PFASs) are synthetic substances used in a variety of consumer products and industrial applications including non-stick cookware, water-repellent clothing, stain-resistant fabrics and carpets, cosmetics, firefighting foams, electroplating, and products that resist grease, water, and oil.						

Figure 4: City of Bloomington 2023 PFAS testing results[9]. PFBA is not a regulated PFAS by the EPA at this time.

Preventing all exposure to PFAS is not practical, however exposure can be reduced by cooking with steel or cast-iron cookware, avoiding oil and water-resistant food packaging and clothing, avoiding stain resistant coatings on carpet and furniture, decreasing usage of personal products that contain "PTFE" or "Fluoro" ingredients, and utilizing water filters designed to remove PFAS such as carbon filtration and reverse osmosis technology[3].

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[1]https://www.fda.gov/food/environmental-contaminants-food/and-polyfluoroalkyl-substances-pfas#:~:text=Per%2D%20and%20polyfluoroalkyl%20substances%20(PFAS)%20are%20chemicals%20that%20resist,%2C%20and%20fire%2Dfighting%20foams.
[2]https://www.epa.gov/pfas/pfas-explained
[3]https://epa.illinois.gov/topics/water-quality/pfas.html
[4]https://www.niehs.nih.gov/health/topics/agents/pfc
[5]https://dph.illinois.gov/topics-services/environmental-health-protection/private-water/fact-sheets/pfas-drinking-water.html
[6]https://www.epa.gov/sdwa/and-polyfluoroalkyl-substances-pfas
[7]https://greensciencepolicy.org/news-events/newsletter/april-2023-pfas-in-the-garden#making-sense-of-epas-proposed-pfas-drinking-water-limits
[8]https://www.normalil.gov/517/Water-Quality#:~:text=The%20amount%20detected%20in%20Normal,No%20other%20PFAS%20were%20detected
[9]https://www.bloomingtonil.gov/home/showpublisheddocument/24534/638500010469890885
[10] https://www.epa.gov/sites/default/files/2018-02/documents/epa-ogwdw-ccr-infographic-v5_508.pdf
[11] https://www.epa.gov/system/files/documents/2023-03/How%20do%20I%20calculate%20the%20Hazard%20Index._3.14.23.pdf

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