

FRIENDS OF LOWER MUSKINGUM RIVER

"To conserve and protect the Lower Muskingum Watershed
for all to enjoy"



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WHY CARE ABOUT PLASTIC IN THE LOWER MUSKINGUM?

By Tiffany Harvey, Executive Director

Physical Harm:

From the whale, sea lions, and birds to the microscopic organisms called zooplankton, plastic has been, and is, greatly affecting marine life on shore and off shore. In a 2006 report, Plastic Debris in the World's Oceans, Greenpeace stated that at least 267 different animal species are known to have suffered from entanglement and ingestion of plastic debris. According to the National Oceanographic and Atmospheric Administration, plastic debris kills an estimated 100,000 marine mammals annually, as well as millions of birds and fishes. Source: <http://plastic-pollution.org/>



Why Care about Plastic Here?

Chemical Harm to animals and humans:

Endocrine Disruptor

In more general terms, experimental research on animals shows that low-level, non-linear exposures to endocrine disruptor chemicals (EDCs) lead to both transient and permanent changes to endocrine systems, as EDCs can mimic, compete with, or disrupt the synthesis of endogenous hormones [20, 43, 44]. This results in impaired reproduction and consequent low birth rates and potential loss of biodiversity, thyroid function, and metabolism, and increased incidence and progression of hormone-sensitive cancers [45]. The research suggests that embryo and developmental periods are critical-sensitive periods to EDCs. 13 EDCs may cause effects in cellular and/or animal models at extremely low concentrations [45]. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5918521/>

Bisphenol A (BPA) is a chemical produced in large quantities for use primarily in the production of polycarbonate plastics and epoxy resins. NTP Center for the Evaluation of Risks to Human Reproduction completed a review of BPA in September 2008. NTP expressed “some concern for effects on the brain, behavior, and prostate gland in fetuses, infants, and children at current human exposures to BPA.

Di(2-ethylhexyl) phthalate (DEHP) is a high production volume chemical used in the manufacture of a wide variety of consumer food packaging, some children’s products, and some polyvinyl chloride (PVC) medical devices. In 2006, NTP found that DEHP may pose a risk to human development, especially critically ill male infants. <https://www.niehs.nih.gov/health/topics/agents/endocrine/index.cfm>

In addition, bisphenol A (BPA), found in polycarbonate bottles and the linings of food and beverage cans, can leach into food and drinks. The U.S. Centers for Disease Control and Prevention reported that 93 percent of people had detectable levels of BPA in their urine. But some of these chemicals (in plastics) have been shown to affect reproduction and development in animal studies, according to the report. Some studies also have linked these chemicals with adverse effects in people, including reproductive abnormalities.

<https://www.scientificamerican.com/article/plastic-not-so-fantastic/?redirect=1>

Carriers of PCBs:

PCBs have been demonstrated to cause a variety of adverse health effects. They have been shown to cause cancer in animals as well as a number of serious non-cancer health effects in animals, including: effects on the immune system, reproductive system, nervous system, endocrine system and other health

effects. <https://www.epa.gov/pcbs/learn-about-polychlorinated-biphenyls-pcbs>

Plastic can chemically bind with PCBs leading to a higher consumption of PCBs when a human or animal drinks water containing microplastics.

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2873017/>

PCBs are the primary pollutant in the Muskingum River according to the EPA. The Muskingum River was assessed in 2008 and determined to be a polluted river.

<https://watersgeo.epa.gov/mywaterway/rdetail.html>

Risk to Biodiversity:

Invasive species can attach themselves on floating plastic and invade new parts of the world disrupting the native environment. <https://www.nationalgeographic.com/environment/2018/08/news-invasive-species-ride-plastic-across-ocean/>

FLMR Happenings

OHIO 2019 River Sweep

On June 15, 2019, over 13 volunteers cleared 30 bags of garbage from FLMR's mussel habitat along the lower Muskingum River below Devol's Dam on the west side.

Afterwards, four volunteers stayed to sort recycling and wash river mud from bottles so those bottles could be recycled. FLMR was able to recycle 10 bags containing mostly single use plastic water bottles. The recycling was later taken to the Marietta Area Recycling Center.

After picking up many water bottles it was easy to become frustrated with the people who had used these bottles, but those bottles likely ended up on the banks in droves because there is a lack of education on where plastics end up and the risks they pose once they accumulate in the environment (please read the previous article).

I suggest purchasing a reusable water bottle which you can carry with you and refill at various water fountains. Not only does it help reduce the amount of garbage in the river, it's also a great money saving technique.



Pollinator Walks

FLMR has hosted many Pollinator Walks this Summer through our blooming native pollinator plant habitat including a walk with the Marietta Natural History Society. Visitors have enjoyed coreopsis, brown-eyed susans, purple coneflower, partridge pea, milkweed, spiderwort, and wingstem.

We host a pollinator walk at each of our Potlucks. Our next Potluck is July 25th at 6PM. Please come so you can see our pollinator habitat at it's peak.



Chanterelle Mushroom Picking

On July 6th, Di Krivchenia, an FLMR Board Member, hosted a Chanterelle Mushroom Picking Party at her home. Several members and newcomers enjoyed a few hours of Chanterelle Mushroom picking.

Chanterelles grow from late spring to late summer. Rainy days followed by hot days create the perfect conditions for finding Chanterelles in hardwood forests.

Chanterelles are great in soups, stews, and sauces and pair well with wines, foods, and herbs.

Please check our website and facebook for updates on other events like this one.





Grisha Krivchenia Classical Piano Concert

WHEN: JULY 28, 2019 3PM

**WHERE: MCDONOUGH ADDITORIUM
AT MARIETTA COLLEGE**

Grisha Krivchenia is a composer and pianist who divides his time among Santa Fe, the Seattle area, and concert dates around the world. He enjoys a busy performance schedule, and his compositions are realized by professional ensembles throughout the Northern Hemisphere. Recent premieres have taken place in Los Angeles, Seattle, and Bucharest.

Grisha completed his studies at Oberlin Conservatory, where he studied piano with Sedmara Rutstein and composition with Jeffrey Mumford. In 2007, Grisha founded the music program at Spring Street International School in Friday Harbor. His solo piano and chamber music is published by Abundant Silence Publishing, and CCC Music Company.

Grisha takes a special interest in using art to amplify voices that might otherwise go unheard. He writes music in collaboration with hospice patients and recently completed a song cycle based on interviews with Syrian refugees living in Jordan, Lebanon, and Turkey.

On July 28th, Grisha will perform at Marietta College's McDonough Center at 3PM. Admission is free and donations are accepted. Half of donations will go to Friends of Lower Muskingum River and half will go to Campus Martius.

The concert program:

Passacaglia (Krivchenia)

Sonata, K 517 (Scarlatti)

Sonata, Op 31 no 3 (Beethoven)

— Intermission —

Scherzo no. 2 (Chopin)

Melodie (Fanny Mendelssohn)

Valle D'Obermann (Liszt)

Fanfare for Solo Piano (Krivchenia)

FLMR Membership Concert: Sadie Johnson

When: August 23, 2019 6PM-8PM

**Where: Luke Chute Conservation
Area**

FLMR is struggling to grow our membership. This is concerning because membership provides our organization with the support it needs in the form of volunteers and funds which are more reliable than grants and individual donations. FLMR needs a reliable source of income to fulfill our mission. We are able to conserve and protect our land holdings and conservation easements because individuals and our members believe in the importance of conservation and share our vision to conserve and protect natural areas in the Lower Muskingum River for all to enjoy.

Please help us grow the number of individuals and members in support by attending this FLMR Membership Concert Event and bringing along a guest who you can encourage to join FLMR.

Our concert will feature Sadie Johnson. Sadie is an established Blues guitarist and senior at Marietta College. She will play any music requested.

Join us for an evening of music and friends!



What is Friends of Lower Muskingum River?

- We are a Land Trust. A land trust is a charitable organization that acquires land or conservation easements or that stewards land or easements, to achieve one or more conservation purposes. The conservation purposes may include protecting natural habitat, water quality, or scenic views; ensuring that the land is always available for farming, forestry, or outdoor recreational use; or protecting other values provided by open land.
- Our mission is to conserve and protect natural areas in the lower Muskingum Watershed for all to enjoy.
- We have protected over 911.8 acres of land. 253.8 of those acres are owned by FLMR and open to the public. 658 acres are protected in the form of conservation easements.
- We are a 501(c)(3) organization that serves Washington and Morgan counties.
- More information about land trusts is available through our website (muskingumriver.org) and Land Trust Alliance (<http://www.landtrustalliance.org/>).

Why do you protect natural areas?

- Natural areas preserve native plants and animals, protecting biodiversity.
- A third of food is derived from pollinated plants.
- Natural areas are key for carbon sequestration. According to the IPCC, 18% of carbon sequestration required to prevent more than 1.5 degrees of global warming will be provided by forest land.
- Protecting land protects water quality.

How do you protect land?

- We work with landowners who wish to preserve their land by donating or selling a conservation easement to the land trust. Donated land can provide a substantial tax benefit.
- We acquire lands which we own using funds from the Clean Ohio Conservation Fund, accepting donations, and using funds from individual donations.
- We manage our properties for important plant and animal species and remove invasive species.

What exactly is a conservation easement?

- An easement is a condition or limitation permanently attached to the deed of the property.

A private organization, like a land trust, or a government unit can "hold" an easement.

- The value of a conservation easement is the difference between a property's development value and its "as is" natural value.
- Eased land can be bought and sold, but the conditions of the easement remain in place.

What does it mean to hold an easement?

- We walk the land and develop the specific language of each easement with the landowner.
- We document the specific conservation or historical values of a property with maps, photos, and descriptions, and attach the documentation to the easement.
- Once drafted and documented, the easement is signed by land trust officers and the landowner, and recorded at the county court house.
- We monitor the properties on which we hold easements annually, and keep in contact with the landowner. If need be, the land trust takes legal action to enforce easements.
- If eased land is sold, we orient the new landowner to the conditions of the easement.

What if Friends of Lower Muskingum River were no longer in business?

- If we were to go out of business, our assets and responsibilities would be transferred to a similar organization; if a local land trust were not available, one of the national or state land trust organizations with which we are affiliated could also take this responsibility.

How are you funded? Do you get money from the government?

- We are supported by donations from members and charitable organizations.
- We do not get funding from the government or from taxes.
- We have a separate fund specifically for monitoring and stewardship costs that is funded primarily by donations from landowners.

How do you decide what land is most important to protect?

- Land is in an area where the FLMR holds easements or is around other already protected natural areas or farmland.
 - Property is important to preserve when considered in context with other areas designated for protection.
 - Land possesses soil types and/or soil productivity which need to be protected.
 - Property includes water resources or other natural features, such as wetlands, forests, and wildlife habitat.
 - Land is unique historically or in other ways.
 - Land meets federal, state, or local guidelines for importance including:
 - Criteria set by federal, state, county, or local governments or private entities to secure funds to buy easements.
 - Identified as critical resource for farmland preservation.
 - Land is in an area where water and sewer are not in place now and are not planned for the future.
 - Property is not in the direct path of current development or development planned within the next 10 years.
- Board determines there is a sense of urgency surrounding the property which could result in a permanent loss of opportunity.

Is funding available to purchase easements?

- Clean Ohio Conservation fund provides money for conservation easement purchases.

What can local government do to assist in preservation of natural areas?

- Townships and counties can develop a plan, identifying those areas most important to preserve and those most logical to develop and can designate natural area or historical areas and zones.
- To get to the right balance of development and preservation, they can evaluate costs and revenues of different land uses- residential, commercial/industrial, and natural areas.
- They can support Clean Ohio Conservation Fund proposals.

What can individuals do to assist in preservation?

- Join the land trust, contribute, and volunteer.
- Consider donation or sale of an easement or a bequest as a part of your own financial planning.
- Talk to your neighbors about joining the land trust or options to preserve their land.
- Tell public officials and candidates that natural and farmland preservation are issues you are concerned about.
- Do a "house party" for fundraiser for the land trust or another fundraiser. Your creativity is appreciated.



348 Muskingum Drive
Marietta, OH 45750

Volunteer!

Property Monitors:

Property monitoring is great for anyone who enjoys visiting new properties and ensuring the conservation easements are upheld. Property monitoring is done during daytime hours in spring, summer, and fall. Property monitoring can be scheduled with executive director, Tiffany Harvey, who will train you.

Property Monitoring includes:

- Contact conservation easements land owners prior to visit to schedule a monitoring visit.
- Visit the office to pick up the property's monitoring binder.
- Use directions found in the binder to travel to the property.
- After arriving on the property, hike and record required information in the Monitoring Report found in the property binder.
- After leaving return your signed copy of the monitoring report to our office and email any photos you have to vista@muskingumriver.org.

Land Stewards (Volunteer Days and Pollinator Habitat Workdays):

- Land stewardship is great for anyone who enjoys working with their hands and being outdoors. Stewardship volunteer workdays occur in spring, summer, and fall. Please check our website and Facebook for times and dates.
- Remove invasive species of plants on our properties.
- Mow and/or weed-eat trails.
- Remove trees and debris from trails.

Table Booths

A great opportunity for anyone who is not physically able and those who don't enjoy being outdoors.

FLMR attends many events where we table booths throughout the year. Volunteers can table those booths. We also have a Farmer's Market Booth where we sell handmade recycled bags each Saturday from 8:30AM-12PM

FRIENDS OF LOWER MUSKINGUM RIVER MEMBERSHIP

The mission of Friends of Lower Muskingum River is to conserve and protect natural areas in the lower Muskingum Valley for all to enjoy.

- | | |
|--|--|
| <input type="checkbox"/> Individual (\$25) | <input type="checkbox"/> Corporate (\$100) |
| <input type="checkbox"/> Family (\$35) | <input type="checkbox"/> Lifetime (\$500) |
| | <input type="checkbox"/> Non-Profit (\$50) |

Full Name: _____

Mailing Address: _____

City, State, Zip: _____

Phone Number: _____

Email Address: _____

FLMR is a 501(C)3 tax deductible organization.

Please Make checks payable to: FLMR

Mail to: Quincy Robe
FLMR Membership Chair
PO Box 31
Malta, OH 43758

