



Complimentary

Informing, Enhancing, Showcasing, Promoting and Educating Michiana – Southwest Michigan and Northern Indiana

All Are Invited for FREE Zoom Series Environmental Fridays at Andrews University

How does the water you drink, the air you breathe, the ground you walk and work and play in affect your health?

Does your water have lead in it?

What do environmental scientists do?

Is where you live more environmental unsafe because you are poor or because you are black?

How does pollution affect wildlife, plants, animals, birds, rivers and lakes?

Should citizens reasonably expect their government to "serve and protect" them from negative unhealthy, even fatal, environmental effects?

Does your community have contaminated sites that can be redeveloped safely and economically?

Are people, livestock and plants around a nuclear plant safe from radiation?

What toxic chemicals are produced by wildfires?

Where can you get air quality information from if you suffer from asthma?

What is the quality of the water you drink?

Is the air inside your home polluted? How do you safely dispose of batteries from laptops and other computers?

By Princella Tobias and Desmond Murray
Spirit Correspondents

These are some of the questions that would be answered by experts every Friday this semester starting on September 25. Environmental Fridays is a series of lectures that can be viewed online by anyone via Zoom live or later. The series was put together by Associate Professor of Chemistry Dr. Desmond Hartwell Murray for his Berrien RESA Math Science Center Grade 10 Chemistry class held on the campus of Andrews University. This series is also co-sponsored by State of Michigan's Office of the Clean Water Public Advocate.

The 8:00 am lectures are designed to teach students how chemistry is involved, real and relevant in their own lives and in their environment. Chemistry is more than just memorizing the Periodic Table of elements, or learning formulas or balancing equations rather it is an essential part of our lived material experiences day in day out. Students are challenged to connect textbook chemistry to the real world and to think scientifically and critically about the world around them in terms of chemical content and principles.

Environmental Fridays can viewed on Zoom at <https://andrews.zoom.us/j/94940797468>. The Zoom meeting ID is 949 4079 7468.

"Indeed, each of the 15 guest speakers are living role models for students that environmental jobs are a viable and rewarding career path. In fact, given all the problems we currently face now in the environment, such as the wildfires on the West Coast, more powerful hurricanes, warmer winters and increased flooding, or the opportunities that exist to address lead pollution or PFAS contamination or turning trash into usable energy or in creating safe biodegradable chemicals for crop growth and protection, students may be able to find possible fields for study in college and for jobs after college," states Murray.

The guest speakers range from uni-

versity professors, to environmental consultants and entrepreneurs, to government experts, local, regional and from more distance parts of the United States.

The series is also designed to give students an opportunity to select a topic of interest that they can then create a public science announcement (PSA) as part of their class requirement. Students will then compete in the BEST Early Berrien RESA PSA competition held in April 2021, at the annual Michigan High School Math & Science Symposium on the campus of Andrews University. PSAs from previous years can be found at: <http://www.bestearly.com/psa>.

MORE ON ENVIRONMENT, PAGE 10

Berrien RESA to Provide PPE to students

As a result of a partnership between the Michigan Department of Education, the Michigan Community Service Commission and the Michigan Association of Intermediate School Administrators, Berrien RESA will be providing thousands of face coverings to students across Berrien County.

"Through our relationship with multiple state departments and associations, we were able to request additional health and safety resources to benefit schools in Berrien County," said Superintendent Eric Hoppstock. "This week, Berrien RESA applied for 18,500 KN-90 masks for students."

The masks will be delivered by the state to Berrien RESA where they will then be distributed to local school districts based on anticipated need.

"All of Berrien County's school districts have purchased face coverings and other personal protection materials to support a safe return to school," said Hoppstock.

The KN-90 masks are being procured on behalf of partnering agencies by the Michigan Department of Health and Human Services and the Michigan State Police. They are expected to arrive at Berrien RESA for distribution early this fall.

BH Girls Academy Seeks Teacher and Mistress

The Benton Harbor Girls Academy is seeking a Teacher and Academy Mistress for grades four through eight.

The Academy is a non-graded, individualized learning environment, with a maximum of ten girls per classroom. The Academy serves students of Benton Harbor, Michigan, an area challenged economically. The teacher will have the professional skills and empathy to work with middle-school age girls needing a strong, sound, growth-focused learning environment for education to meet life's challenges with competence and dignity.

In addition to a part-time teacher for one classroom of girls, the Academy is

seeking someone with the professional skill and experience to serve as part-time Academy Mistress/Principal. The small school setting and dual responsibility are ideal for a creative, organized, and dedicated educator who wants to make a difference in the lives of girls.

Interested individuals please send a resume, including education, experience, and references, to Dr. Patricia Ann Quattrin Ph.D., Executive Director, Benton Harbor Girls Academy, P. O. Box 840, Benton Harbor, MI 49023 or to:

dr.patriciaquattrin.bhga@gmail.com.

YOUR DAUGHTER HAS HER WHOLE LIFE AHEAD OF HER

Give her a good start at the Benton Harbor Girls Academy



The Benton Harbor Girls Academy is now accepting current third, fourth and fifth graders for the year. Some advanced second graders are also being accepted, space permitting.

A nurturing environment she'll love

- A strong education that will help her succeed
- A safe and nurturing setting
- Individual instruction to strengthen her self esteem and help guide her intellectually and socially
- Instruction in art, music, dance, life skills, health and nutrition, gender and ethnic heritage, and more

Schedule an interview today

Call Mistress Patricia Ann Quattrin Ph.D. at 269-925-9922.

Openings are limited, so call now.



Benton Harbor Girls Academy

www.bentonharborgirlsassociation.org

Free Tuition for Frontline Workers offered at LMC

Lake Michigan College is among the community colleges participating in the Futures for Frontliners program unveiled today by Gov. Gretchen Whitmer.

The scholarship program offers free tuition to Michiganders who worked in essential industries during the height of the COVID-19 pandemic shutdown. It covers the cost of associate degrees, certificates and high school equivalency exams.

The program aims to increase the number of skilled workers in the state and help essential workers earn higher wages. On average, workers with a two-year degree earn \$7,500 more annually. Seventy-five percent of Michigan jobs require education beyond high school.

"This is a terrific opportunity for current and former LMC students who haven't yet completed their degrees. Many of them worked during the state shutdown, putting their health on the line to keep our community going. They're heroes and deserve every chance to pursue their dreams," LMC President Trevor A. Kubatzke said.

Essential workers in Michigan without a college degree or high school equivalency who worked at least half-time in 11 of 13 weeks from April 1 through June 30 are eligible for the program. This includes employees who staffed grocery stores and restaurants, provided waste management services, manufactured Personal Protective Equipment (PPE), operated public transportation, or provided critical police or fire services, among others.

Those without a high school diploma or equivalency are eligible for additional services to help them prepare for and complete their GED before going on to a community college or job training program.

Scholarship applications are currently being accepted through Dec. 31. Once accepted into the program, frontline workers can enroll in spring semester classes which begin on January 11, 2021.

To learn more about Futures for Frontliners at LMC, visit www.lakemichigancollege.edu/frontliners or call (269) 927-6596.

CHEMSEM NEWS 4, FALL 2020

Andrews University Department of Chemistry & Biochemistry

Dwain L Ford Guest Lecture Series

How Does Nature Create Color?



Silvia Vignolini, PhD

Professor of Sustainability and Bio-Inspired Materials

Department of Chemistry

University of Cambridge, United Kingdom

Thursday, September 24, 2020, 4:30 pm (EST)

Live-streamed at <https://andrews.zoom.us/j/92307867479>

Co-Sponsors

Andrews University Office of Research & Creative Scholarship, Berrien RESA Math Science Center

Free Environmental Fridays at Andrews University • 2020-2021 Schedule

ENVIRONMENT, CONTINUED FROM PAGE 1

Below is a list of dates for guest speakers and presenters for the Environment Fridays Speaking Series at Andrews University. All events are free and open to the public and can be viewed on Zoom at <https://andrews.zoom.us/j/94940797468>. The Zoom meeting ID is 949 4079 7468.

For more information, contact Dr. Desmond Murray via email: murrayd@andrews.edu or at (269) 757-1641).

9/25/2020: Ann St. Amand Careers in Environmental Science

Ann St. Amand holds a B.S. in Ecology, Evolutionary and Population Biology from Purdue University and a Ph.D. in Aquatic Ecology from the University of Notre Dame. She has been the President and owner of Phycotech, Inc, an environmental consultant company in St. Joseph, Michigan since 1990.

10/2/2020: Matt Robbins Government and the Environment

Matt Robbins was hired by the United States Environmental Protection Agency in December of 1970, two weeks after the founding of this new agency on December 2, 1970. He has academic degrees in philosophy, a Masters degree in public administration and in theological studies and has done pre-doctoral work in environmental management and labor management relations.

10/9/2020: Simone Charles Environmental Justice – Soil Chemistry Case Study

Simone Charles is a Clinical Associate Professor in the Department of Environmental Health Sciences at University of Michigan with a doctorate in Environmental Chemistry and Toxicology; a postdoctoral fellowship in Environmental Health Sciences. She has several years' experience working with academic-community partnerships to address health impacts of environmental hazard exposures on underserved rural and urban communities.

10/16/2020: Laurel Berman Brownfields I, 10/16/20

Laurel Berman is the National Brownfields Coordinator with the federal Agency for Toxic Substances and Disease Registry (ATSDR) Division of Community Health Investigations. Dr. Berman coordinates the ATSDR Land Reuse Health Program, which integrates public health and redevelopment from the early planning stages. Dr. Berman holds Ph.D. and M.S. degrees in Environmental and Occupational Health Sciences from the University of Illinois at Chicago School of Public Health, with a focus on industrial hygiene and toxicology.

10/23/2020: John (Jack) B. Giessner Nuclear Energy & the Environment

John (Jack) B. Giessner serves as the U.S. Nuclear Regulatory Commission Regional Administrator, Region III. Mr.

Giessner joined the U.S. Nuclear Regulatory Commission (NRC) in 2004 as a Reactor Engineer in Region III. Before joining the NRC, Mr. Giessner was an officer in the U.S. Navy and served on nuclear submarines, and worked on Operations for nuclear weapons. He received a Bachelor's Degree in Physics from the U. S. Naval Academy and a Master's Degree in National Security Affairs from the Naval War College.

10/30/2020: Padma P. Tadi Uppala Your Health and the Environment

Padma P. Tadi Uppala is the Chair of the School of Population Health, Nutrition & Wellness and Professor and Director of Public Health Program at Andrews University. Uppala earned a Ph.D. in Tumor Biology with a focus on environmental carcinogenesis in 1991 and an MPH in Lifestyle Medicine from Loma Linda University. She has post-doctorate experience in environmental toxicology. Uppala's research investigates the contribution of environmental factors to breast cancer, serum proteomic breast cancer biomarkers, dietary prevention of cancer, and community participatory research.

11/6/2020: Marc Florian Brownfields II

Marc Florian is Vice President of Environmental Consulting & Technology, Inc. located in Benton Harbor, Michigan. He graduated from Mississippi State University with a BS in Geology/Petroleum, and went on to secure an MS from Michigan State University in Geology/Stratigraphy and MBA in Strategic Marketing from the University of Houston. For more than 30 years, Mr. Florian has worked as a professional service contractor under various state-sponsored clean-up initiatives and contracts. Florian has authored more than 100 brownfield redevelopment plans, and served as technical advisor to state agencies and legislators in the conceptualization and implementation of strategies aimed at incentivizing brownfield redevelopment.

11/13/2020: Nate Fuller Ground Water Quality and the Environment

Nate Fuller is the Executive Director of Sarett Nature Center. He first worked at Sarett as a naturalist from 1995 to 2001 before returning as director in 2019. Nate received a bachelor's degree in biology from Northland College in Ashland, Wisconsin and a master's degree in geography with an emphasis in environmental and resource analysis from Western Michigan University in Kalamazoo.

11/20/2020: Coleen Fruin Pollution and Wildlife

Coleen Fruin has a Bachelors of Science degree in Wildlife Ecology and Management, from Michigan Technological University, completed in 2014. Before college, she went to a public high school in the south-west suburbs of Chicago. She has

worked as a utility forester managing vegetation along power lines. Since then she is attending Michigan State University working on prerequisites for veterinary school. She enjoys studying the links between ecology, toxicology, and disease in wildlife.

12/4/2020: Ninah Sasy Water Quality and Public Health

Ninah Sasy serves as the Head of the Office of the Clean Water Public Advocate that was created through Governor Whitmer's Executive Order 2019-06. The Office of the Clean Water Public Advocate ensures that drinking water concerns across the state of Michigan are investigated, analysed and that solutions are implemented. Ninah Sasy comes to the Office of the Clean Water Public Advocate with an extensive background in public health, emergency response, and strategic planning. Ninah began her career with the Michigan Department of Health and Human Services as the Chemical Threat Laboratory Exercise Coordinator. With a Master of Science in Administration and a Bachelor of Science in Clinical Laboratory Science, Ninah brings a solid base of academic knowledge to support her experience and is committed to serving as an advocate to Michigan residents.

Dale LeCaptain - Great Lakes Water Quality, 12/11/20

Dale LeCaptain completed his undergraduate degree in Chemistry from University Wisconsin LaCrosse (1994) and his PhD in Analytical Chemistry from Michigan State University in 1999. After Post-Doctoral experience at both Michigan State and Colorado State University he joined Central Michigan University in 2001. As Professor in the Department of Chemistry and Biochemistry he instructs Analytical Chemistry at all levels and was instrumental in the design of the Environmental Chemistry Concentration now available.

1/15/2021: Erin Fuller - Effects of Agriculture on Water Quality

Erin Fuller is the watershed coordinator for the Van Buren Conservation District in Paw Paw, Michigan. She has been creating and implementing conservation projects in this role for 17 years. Erin enjoys working with landowners and partners from all backgrounds and experiences to protect and restore our natural heritage. Her projects range from conservation planning at regional scales to practical applications of on-the-ground management techniques with local landowners. Erin has a BA in Biology from Skidmore College (NY) and a MA in Geography from Western Michigan University.

1/22/2021 and 2/5/2021:

Motria Caudill Air Pollution; Climate Change,

Motria Caudill is an Environmental Health Scientist at the Agency for Toxic Substances and Disease Registry (ATSDR), which is a part of the Centers for Disease Control (CDC), and an adjunct associate professor at University of Illinois at Chicago, School of Public Health (UIC-SPH). Dr. Caudill's work has taken her to India, Viet Nam, and Ukraine, to conduct research projects and train local specialists. She holds Ph.D. and M.S. degrees in Environmental and Occupational Health Sciences from UIC-SPH, with a focus on toxicology, risk assessment, and air quality management.

1/29/2021: Mary Reynolds Indoor Pollution

Mary Reynolds works at the Environmental Protection Agency in the Region 4 office located in Atlanta, Georgia. She is a Physical Scientist and Radon Coordinator in the Communities and Air Toxics Section in the Air and Radiation Division. Mary graduated from Tulane University with a B.S.P.H. in Public Health and a B.S. in Earth and Environmental Science. Before starting her career with EPA, she was a Peace Corps community health volunteer in Uganda.

1/20/2021: Heidi LeSane Indoor Pollution

Heidi LeSane works at the Environmental Protection Agency (EPA), Region 4 Air and Radiation Division, and she is a Life Scientist and the Asthma Program Coordinator for the Southeastern states of Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, and Tennessee. Heidi has a focus to decrease the number of asthmatics exposed to indoor environmental asthma triggers and to educate individuals on the environmental management of asthma. Heidi LeSane is a proud graduate of Auburn University at Montgomery with a B.S. in Biology and has her Masters of Public Administration in Environmental Management from Troy State University.

More About Dr. Desmond H. Murray

Dr. Desmond H. Murray is Associate Professor of Chemistry at Andrews University, in Berrien Springs, MI. He is also Chemistry Instructor for Berrien County Math Science Center, Founder of Building Excellence in Science and Technology (BEST Early; www.bestearly.com), Lead Editor of the 2016 book *The Power and Promise of Early Research* (<http://www.bestearly.com/earlyresearchbook>), and Editor and Contributing Writer for *Benton-Michiana Spirit Community Newspaper*.

Dr. Murray was also the recipient of the 2012 College Science Teacher of the Year for the State of Michigan.

For more information or to contact Dr. Murray: email: murrayd@andrews.edu, tel: (269) 757-1641).

GREAT EDUCATIONAL SERIES FOR
COMMUNITY, TEACHERS, STUDENTS
AND HOME-SCHOOL PARENTS.

Working Together to Reduce Lead Exposure from Drinking Water in Benton Harbor

Recent testing has led to the discovery of high lead levels in drinking water in Benton Harbor. State and local partners are working together to make sure that you have the information needed to protect your family. Visit Michigan.gov/CleanWater for additional information or assistance in protecting your family from lead in drinking water.

What actions have been taken so far?

Though the water treatment plant is relatively new, Benton Harbor's water distribution system is about 100 years old with much of the original infrastructure still in use, including water mains and service lines. A high number of lead service lines were installed in the first half of the 20th century, and many homes built before the 1960s are likely to have lead service lines or fixtures and faucets that may pose a health risk to residents.

Elevated lead levels were first discovered during routine testing in 2018. The first action taken was to tell Benton Harbor residents that there were elevated levels of lead in the drinking water and how to protect themselves by running their water, and/or by obtaining a lead-reducing water filter.

To get a water filter or replacement cartridge, visit:
berriencounty.org/1599/City-of-Benton-Harbor.

The City has since installed corrosion control treatment to help reduce the amount of corrosivity of the water, which will reduce lead levels, and has begun the process of replacing lead service lines (estimated to be 3,011 lines). This is an important step because the best way to reduce lead levels is by removing the sources of lead in the system.

The City has also increased the monitoring of lead and copper. The City is now required to sample twice as many homes, and they are required to sample those homes more often (every six months instead of every three years). This increase in sampling helps to better monitor the levels of lead and copper in the system, and will show when the corrosion control treatment has become effective in lowering the levels of lead.

How can I stay informed?

This fall, a range of stakeholders are working together to host a three-part series in the Benton Spirit Community Newspaper. The series will provide residents with an overview of when lead was discovered in water in Benton Harbor, what's being done to address the issue and to support community residents, and plans to remove lead service lines in Benton Harbor. The Benton Harbor Community Water Council; the City of Benton Harbor; Berrien County Health Department; Andrews University; Freshwater Future; the Benton Spirit Community Newspaper; the Michigan Department of Environment, Great Lakes, and Energy; and the Michigan Department of Health and Human Services are joining forces to ensure that Benton Harbor residents have access to information and free resources to reduce lead in water. This effort is being led by the Office of the Clean Water Public Advocate. The Office of the Clean Water Public Advocate was created through Governor Whitmer's Executive Order 2019-06 to improve access to information and resources around water quality in Michigan.

CITY OF BENTON HARBOR

Water System History



1938

Construction of water tower at Britain Street, helping to keep pressure on the system and provide water for fire fighting.



1990

Upgrades to water treatment plant to update equipment, including pumping and chemical treatment.



2011-2013

Loss of Township customers results in reduced sales of water.



2020

City Commission approves water rate increases based on a study of water system finances and needed improvements.

1914 and previous

Construction of original pipe network for well water. (Exists today as the distribution system.)



1950

Construction of original water treatment plant and Lake Michigan water intake.



2010

Upgrades to water treatment plant to replace outdated treatment process and upgrade computer controls.



2020

Upgrades to the Distribution System to replace aging water pipe and lead service lines, and repaint the water tower.

Last updated August 2020 Photo credit: Ernie Sarkipato, EGLE

Can I get my water tested for lead? If so, how?

To determine if your home qualifies to be included in City testing (homes with lead service lines), call Mike O'Malley at 269-363-0575. If your home isn't eligible for the compliance program, there are other options for testing. The City may be able to connect you to a certified lab, or you can directly contact a certified lab. A list of certified labs is available at Michigan.gov/EGLElab. If you have questions about testing your water, you can also contact MDHHS at 844-934-1315.

If you would like to join state and local partners to help spread the word about lead efforts in Benton Harbor, email EGLE-CleanWater@michigan.gov.