

# Notes from the FOREST



Lacawac  
Sanctuary  
Field Station and  
Environmental Education  
Center

Spring 2020  
Newsletter

## The Importance of Environmental Education

Credit: *The Growing Green Room.*  
[www.growinggreenroom.org](http://www.growinggreenroom.org)

We have all heard the refrain that our obligation as a society is to leave behind a better world for our children. In a world that will be inherited by our children, it would seem that the best way to ensure a better, healthier planet is to equip today's youth with the knowledge and leadership skills to meet tomorrow's environmental challenges. This requires parents taking an active role in educating the next generation. Our commitment to providing children with an environmental education will help them become environmental citizens that will be the thought leaders of tomorrow. Nurturing a respect for nature and all living things is an imperative that parents can convey to their children. Parents can do this by supporting and encouraging attitudes at home and at school that emphasize the importance of environmental education.

### *Break the Indoor Habit: Reconnect Children with Nature*

Society is in the midst of one of the most profound paradigm shifts in history. Technological advances are changing the way we live. This societal shift is leading to more screen time for children. As a consequence, today's generation of children is the first to grow up indoors. Children must first experience nature on their own terms before they can be asked to consider and address our more complex environmental issues. Parents can help by encouraging their children to spend time outdoors. Children need the opportunity to develop a personal connection with nature. This means hands-on learning, which encourages gentle observation. Walks around the neighborhood, trips to nearby forests or parks, day trips to the beach or mountains all provide opportunities for discovery that generate curiosity and passion. Discovery is the precursor to environmental literacy and advocacy for our children.

### *Encourage Academic Study*

Helping children correlate school subjects with environmental interests is a great tool to help children "connect the

dots" between classroom study and their outdoor experiences. Math and Science provides a means to problem solving and information gathering, while social studies can serve as a model for civic action. The combination of academic and practical knowledge sets a strong foundation for future environmental or conservation studies.

### *What More Can Parents do?*

When it comes to environmental education there is much parents can do to promote responsible environmental citizenry. Parents are the single-most influential influence in a child's life; the role of parents as educators, role models, and mentors is of paramount importance. As society becomes more aware of the self-inflicted dangers that it has imposed upon the planet, the need for parents to teach children about environmental stewardship grows evermore important. These teaching opportunities can also encourage parents to reflect upon the manner in which they are positively or negatively contributing to their family's view of environmental protection and conservancy.

## Results of the 2019 Citizen-Led Water Quality Monitoring of Lake Wallenpaupack

In 2019, Lacawac's PLEON program started a citizen-led water quality monitoring program on Lake Wallenpaupack. Lake Wallenpaupack is the 3<sup>rd</sup> largest lake in Pennsylvania and is an important economic resource for the area. This program trains lake community members as citizen scientists in order to collect water quality data from many locations around the lake over many time points. These data can then be used to identify pristine or problem areas and identify changes in water quality over time.

Thank you to our 2019 Lake Wallenpaupack citizen scientists: Bill Leishear, Peter Paul Olszewski, Sheryl McClosky, the Bouchard Family, Terri Marcellus, Quinn Williams, Sinclair Ogof, Mary Ellen Bentler, and the Heck Family! These dedicated volunteers recorded lake temperature, Secchi depth (a

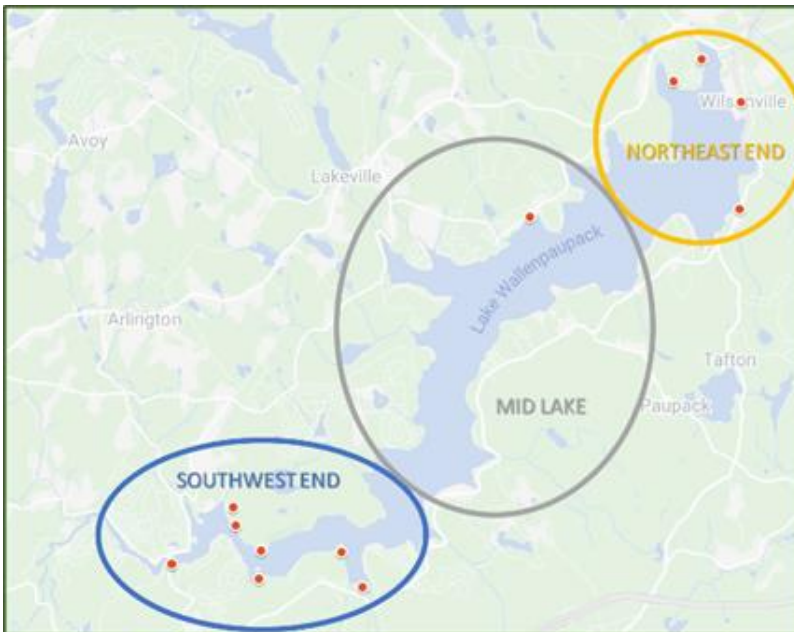
measure of water clarity), water color, and the types of particles present weekly during June, July, and August. They also collected water samples which were analyzed at the Lacawac Environmental Laboratory for the amount of algae in the water.

One of the major findings of the 2019 program was the lake-wide algae bloom that was present during much of the summer. Water samples collected by citizen scientists showed a marked increase in the chlorophyll concentration in the lake starting in mid-July. Chlorophyll is the green pigments found in algae cells and is used as a measure of the amount of algae present. This increase in algae abundance was seen across all sampling locations.

Around the same time, citizen scientists recorded a decrease in Secchi depth. Secchi depth is an indication of water clarity. It is measured by lowering a black and white disk straight down into the water. The depth at which the disk just disappears from view is the Secchi depth. Lakes with clear water have deeper Secchi depths than those with more murky or dark water. The fact that

Secchi depth declined in Wallenpaupack at the same time the chlorophyll concentration increased suggests that the algae bloom was negatively impacting water clarity.

The full [2019 Wallenpaupack Citizen-Led Water Quality Report](https://www.lacawac.org/pleon.html) is available on our website at <https://www.lacawac.org/pleon.html>. The 2020 program is accepting volunteers now (more details found in this issue of *Forest Notes*). One of the key questions moving forward is how often does Wallenpaupack experience prolonged, lake-wide algae blooms such as the one observed in 2019?



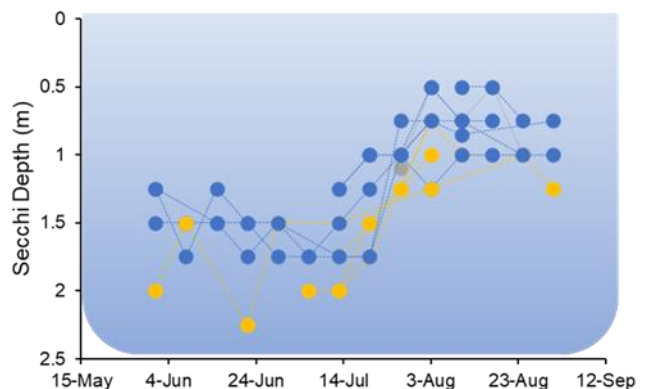
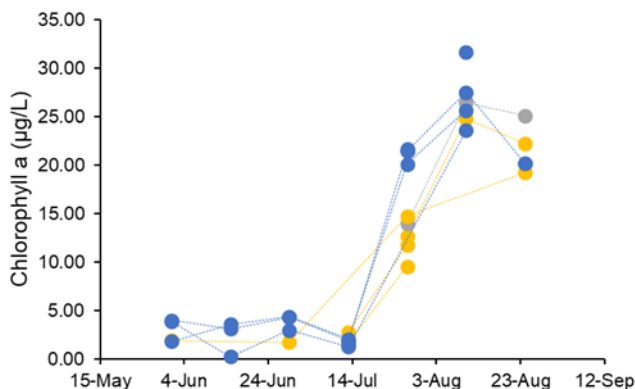
**SAVE the DATE!**

**Jake's Pack Virtual 5K  
Run and Walk**

**Friday July 10<sup>th</sup> –  
Sunday July 12<sup>th</sup>**

**More information or  
register at:**

<https://www.lacawac.org/jakes-pack-5k.html>







**LACAWAC**  
SANCTUARY  
AND BIOLOGICAL FIELD STATION



## LACAWAC SANCTUARY **SUMMER CAMPS '20**



**ON-SITE CAMP 9AM-3:30PM**

**Natural Connections. Ages 8-11**

**\$200 for 2 weeks/ \$115 for 1 week**

Join us for a fun-filled 2 week program with modified activities to comply with the safest policies aligned with COVID-19 restrictions.

Welcome to our newly modified day-camp program! During this fun and safe nature experience campers learn about habitats, investigate climate and weather patterns, examine animal adaptations, and inquire about the inner workings of our local ecosystems through scientific observation and hands-on activities. Enjoy time outdoors in a noncompetitive environment making new friends, playing games, creating art projects, hiking and more.

Join our experienced counselors for 1 or 2 weeks.



**VIRTUAL CAMP 9AM COUNSELOR CONNECTIONS**

**Backyard Adventures. Ages 7-11**

**\$80**

**(\$60 with a \$20 refundable deposit.)**

Welcome to your summer camp at home! This program is full of fun activities and lessons to do in your backyard, along with daily interactive Google meets. Crafts and ecological experiments along with their instructions will be provided in your very own materials kit! Kit will include all you need to participate in camp- magnifying glass, nature journals, clipboards, bug-boxes, and more for you to keep after camp is over! Some materials may be returned for a reimbursement.



To register visit us at:

**[www.lacawac.org](http://www.lacawac.org)**

## Be a Scientist While Social Distancing!

This summer is likely to be a bit different than expected and you may be looking for fun outdoor activities while social distancing. Lacawac has citizen science opportunities for all ages.

### Document Environmental Change with your Cell Phone

Lacawac is part of the Chronolog Project, an effort to create time lapse records of environmental change through the power of citizen science. Time lapse records are important because they help scientists identify gradual but important changes in ecosystems such as changes in species composition or the timing of season changes. There are two Chronolog sites at Lacawac: one located on the Boardwalk overlooking Lake Lacawac (accessible via the Lake Lacawac Trail) and one located along the Big Lake Trail overlooking a plot of recently planted hardwood saplings. Participating in the project is easy. Simply place your cell phone in the plastic bracket, take a photo, and email the photo to the address on the posted sign. Your photo will be added to the time lapse video of the site which can be viewed on the [Lacawac Chronolog Project](#) website. The process takes minutes and adding more photos creates a more complete time lapse – so take a photo each time you pass by a bracket!

### Monitor the Water Quality of Lake Wallenpaupack

We are looking for volunteers for the 2020 Wallenpaupack Citizen Science Program! Here is how it works: the program requires sampling from the same location on Lake Wallenpaupack (such as a dock or moored

boat) every Saturday during June, July, and August. Sampling methods are easy to learn and are appropriate for school age children and adults of all ages. This program makes a great summer school science project or a citizen science participation badge. To join, attend one of the [virtual training workshops](#). Following the workshop, you will receive a sampling kit following the training. If you have participated previously and already have a kit, you will receive a “kit refill”, which includes a 2020 sampling schedule and clean bottles, labels, and baggies for water sample collection. Then simply choose a sampling location and follow the sampling schedule. At the end of the summer, PLEON scientists summarize the data and communicate the results and their implications to program participants and the larger community.

### Survey Aquatic Plants in Your Lake

Aquatic plants are vital components of lake ecosystems. However, several species of aquatic plants are not native to the Pocono region. Once established, these invasive species can be difficult and costly to remove. Help us understand the distribution of native and invasive aquatic plants in Pocono lakes by participating in the PLEON Aquatic Plant Survey. Start by attending a PLEON Aquatic Plant workshop or by viewing the [PLEON Aquatic Plant slideshow](#). Choose a calm day in July or August and follow the self-guided [survey protocol](#) to map the aquatic plants in your lake.

**Be sure to follow all federal and state mandated social distancing guidelines while participating in Lacawac citizen science programs!**

## Environmental Education Comes Home for Students During COVID-19 Pandemic



Lacawac Sanctuary has launched a new online environmental learning center designed to be a resource for parents, and students during the COVID-19 pandemic.

Since Lacawac's foundation in 1966, our education work has focused has been to shape the next generation of earth stewards through outdoor learning. But due to restrictions related to coronavirus, for the first time Lacawac has cancelled all educational field experiences this spring.

Lacawac therefore has undertaken a new effort to bring outdoor education experiences to students tasked with learning remotely. This new remote learning center, called “Virtual Learning Center,” features videos of professional educators discussing environmental science topics.

Lacawac's team of educators and scientists will continue creating new material that anyone can benefit from during the pandemic. The new environmental videos and activities are being compiled on our Virtual Learning Center page of our website.



## LACAWAC STAFF

Craig Lukatch, President  
[craig.lukatch@lacawac.org](mailto:craig.lukatch@lacawac.org)

Beth Norman, PhD, Director of Science and Research  
[beth.norman@lacawac.org](mailto:beth.norman@lacawac.org)

Jamie Reeger, Director of Environmental Education  
[jamie.reeger@lacawac.org](mailto:jamie.reeger@lacawac.org)

Gene Shultz, Environmental Educator and PIER Director

Hailey Main, Environmental Educator

Brooke Hallstead, Environmental Educator

Alyson Carr, Financial Controller

Roy Chesseri, Maintenance Director

Wesley Hearn, Custodian

# Upcoming Events:



## Animal Detectives

Saturday, June 27th

10:00am - 12:00pm

\$10 Family (up to 4)

\$5 for each additional person

Bring the whole family for this interactive detective program. Follow the clues to figure out which animals are active at Lacawac and guess the animal parts. Clues and stations will be placed on the trail, each family will complete the loop to complete the clue sheet. Rewards will be given, and questions answered by the environmental educator after completion. Social distancing will be maintained during this outdoor program. Rain date: June 28 at 4:00 PM. **Online registration required.**



## Wilderness Survival

Saturday, July 11th

10:00am - 12:00pm

\$10 Family (up to 4)

\$5 for each additional person

If you had to pick only 10 things to help you survive what would they be? Learn essential survival skills and how to use the tools to keep you alive. Learn map reading, fire starting, and shelter building skills. A fun interactive program for the whole family. Social distancing will be maintained during this outdoor program. Rain date: July 12 at 4:00 PM. **Online registration required.**



## Preserving the Harvest

Saturday, August 15th

10:00am - 12:00pm

\$10 Family (up to 4)

\$5 for each additional person

Preserving the Harvest – Learn how to store your garden or farmers market bumper crops to savor

throughout the year. Demonstrations and information on freezing, canning, drying, and fermenting will be shown. This program will be conducted outdoors with social distance seating. Space is limited for best seats. Rain date August 16 at 4:00 PM. **Online registration required.**



## Full Moon Paddle

Wednesday, September 2nd

6:00pm

\$10 per person

Join us for an evening on Lake Lacawac. After a short boating safety instruction, we will use social distancing practices to safely enjoy the sun set and moon rise on the lake. **Online registration required.**

REGISTER for these Programs on our website:

[www.lacawac.org/programs.html](http://www.lacawac.org/programs.html)