Welcome to another issue of the volunteer newsletter. Summer officially arrived on June 20th and with it came unseasonably warm temperatures. I want to thank all the volunteers who assisted on June 12th and 13th with tilling of soil around the visitor’s center, spreading of buckwheat seed, laying down of straw, and setting up water sprinklers. I think that if you were here last week, you could have watched the buckwheat seed germinate and the plant shoots growing as if you were watching a time lapse video. The buckwheat will serve as a cover crop meant to outcompete weeds and build up the soil profile in preparation for frost seeding of native grasses and flowers this October.

Another thanks to all the volunteers that came out to help with Wild School on May 23rd. Approximately 78 sixth-grade students from Tucker Valley, Davis/Thomas, and Harman schools spent the day learning about wetlands, what lives in them, how plants and animals adapt to their environment, and why it is important to preserve/restore the habitat. It is so rewarding to see the excitement and smiles of so many children learning about the refuge and all that we do.

We started to see white-tailed deer fawns “dropping” the first week of June. If you happen across a lone fawn in your daily travels, it is not orphaned, rest assured….mom is close by. Fawns are relatively scent free and their greatest defense against predators is to remain motionless tucked away in some tall grass or next to some other dense vegetation.

The Chris Clower trail project is well under way. This 3-mile trail will be a single-track connector trail between Cortland Road and Hellbender Trail along the western edge of the Canaan Valley. The trail utilizes existing and recently acquired USFWS lands that flank the upslope edge of the Canaan Valley. The alignment utilizes existing woods/haul roads and benches for much of its route, which provide easy access for trail development while minimizing additional impacts to the surrounding terrain. The trail has been a decade in the making from conception to execution. Local trail builder Zac Adams of Appalachian Dirt is performing the work.
Volunteer Highlights!

Welcome to all our new volunteers!

Kas Bare, James Hook, David Runkle, Shawn Miller, Cece Niemi, Danielle Finegan, Wayne Keplinger, Shawn Kuba, Mike Kuba, Tom Seekins, Jay Jordan, and Amylynn Ephraim!

Total volunteer hours for Fiscal Year 24 through the 3rd quarter are 2,725. You have almost beat last year’s total hours (2,820) in the first three quarters of FY24. CONGRATS!

Mike Anderson receiving his 1000-hour award.

Jim Triplett receiving his 1000-hour award.

Cindy Phillips receiving her 200-hour award.

Liz Olmo receiving her 500-hour award.
Volunteer Highlights Continued

Bud and Phyllis Hazel receiving their 100-hour awards.

Nora Howell receiving her 50-hour award.

Lowell Hott and Dottie Eddis receiving their 25-hour awards.

Pam Runkle receiving her 50-hour award.

Tammy Everson receiving her 25-hour award.

Sallie McElrath receiving her 25-hour award.

Mart Sturm receiving his 100-hour award.
Volunteer Highlights...Still Continued!

Thanks for all the hard work you dedicate towards the refuge!

As a reminder, please send your hours to stephanie_roy@fws.gov if you are unable to record them at the refuge.

To accommodate new staff for the Ecological Services Office, the Mud Room has now been converted into office space. The volunteer sheets that were in the Mud Room can now be found on the fridge in the maintenance building. The Native Garden and Visitor Center sheets are still located in the VC binder. Admin volunteers can record their hours on the sheet in Stephanie's cubicle.
Featured Volunteer: Cindy Phillips

How many years have you been volunteering for the Refuge?
I started volunteering at the refuge in 2001 gathering information and scouting for an interpretive project for the Beall Tract.

How did you learn about volunteering for CVNWR?
I first learned about volunteering at the refuge through the then Visitor Services Manager, Jackie Burns. Jackie was building programs and a volunteer corps during the early years of the refuge. She was conducting outreach events and I had attended one of these programs.

What types of projects have you worked on or are currently working on?
I’ve volunteered on some of the long-standing projects that have been conducted by the refuge including vernal pool surveys, red spruce and balsam fir plantings, water quality monitoring, and as an Adopt-a-Trail monitor, as well as working on other trail-related projects. Volunteering for the annual Wild School event at the refuge has been a long-standing commitment too. Also, as a member of the Tucker County Highlands History and Education Project (or TCHHEP, a committee of the Friends of the 500th), I’ve led oral history training for TCHHEP and wrote articles and collected information for the Chronicles articles in the Friends newsletter, The Timberdoodle. I designed the first 2 volumes of Behold! The Land of Canaan book, a project of TCHHEP.

Currently I’ve been working on organizing, identifying, naming, and tagging images from the refuge's collection of photos, and am doing monthly water quality monitoring for several of the sites on the refuge. I also administer and contribute to the Friends of the 500th Facebook page.

What has been your favorite project?
Being the history geek I am, the Tucker County Highlands History and Education Project has been my favorite project. Researching and documenting the cultural and natural history adds to my love of Canaan Valley and Tucker County. Knowing how land use, family history and occupations, and people’s opinion on the best use of land has impacted the land’s current condition is interesting to me and adds to my understanding of this place.

What advice do you have for any future volunteers coming to the Refuge?
Bring your special talents and energy to help as a volunteer at the refuge. Extra hands, heads, and hearts are always needed.

How has volunteering at the refuge helped you?
I think volunteering at the refuge has connected me to a community of like-minded people who share the love of this place. It has kept me engaged in getting outside and appreciating what we have here at Canaan Valley National Wildlife Refuge.

What motivates you to continue to volunteer at the refuge?
I hope my time and efforts in volunteering adds to the public’s appreciation and support of this place. Referencing the current refuge’s Comprehensive Conservation Plan (CCP), I look to this excerpted vision statement for motivation:
“As an integral part of the surrounding community, the Refuge provides high quality, safe, wholesome, and diverse opportunities for education and recreation. The refuge experience fosters public interest in the beauty and unique character of Canaan Valley, an appreciation of fish and wildlife ecology, plant ecology, and stewardship of the natural world.”
Introducing Our Invasive Interns!

Meet Trinity Mace...

Hey there! I’m Trinity Mace, hailing from Spencer, WV. I’m an Oregon State University senior majoring in Fisheries and Wildlife Science and Conservation. My passion for nature runs deep, and I’m always eager to expand my knowledge and explore its natural wildlife and wonders. I’m thrilled to serve as an invasive species Intern at the Canaan Valley Wildlife Refuge, gaining valuable insight into its unique ecosystems. I take great pride in my West Virginia roots and am determined to make a positive impact on our esteemed state in the future.

...and Hallye Green!

Hi everyone! My name is Hallye Green and I am from the great state of Idaho! I graduated last December with a B.S. in Biology emphasizing in Environmental Science. I enjoy everything and anything outdoors, from snowshoeing to fly fishing! I am Super Excited to be joining the Canaan Valley team as an Invasive Species Intern for the summer with hopes to broaden my field work experience and knowledge about the beautiful natural resources Canaan Valley has to offer!

Big Cove Celebration

On May 10th, we celebrated the transfer of the Big Cove Property from The Nature Conservancy to the U.S. Fish and Wildlife Service!

The Big Cove is a 1,971-acre parcel that sits at the northern end of Canaan Valley. This land contains the majority of the drainage area for the Little Blackwater River and hosts wetland habitats vital for rare species and migratory birds. In addition, this acquisition will increase public access for hunting and wildlife viewing. The protection of this property has been the culmination of over a decade’s worth of effort from West Virginia Nature Conservancy and our other partners.

We ended the day by going to the Founder’s Overlook on A-Frame Road, where the clouds lifted just enough for us to catch fantastic views of beautiful Canaan Valley.
Visitor Services Updates and Volunteer Opportunities

Visitor Center

Summer is here! And with that comes a surge of visitors ready to discover the natural wonders of Canaan Valley! Thank you to all the awesome volunteers helping our visitors find their adventure on the refuge.

To help combat the high traffic in the Visitor Center, we are looking to have at least two volunteers signed up for shifts at the VC/Bookstore. It’s a great way to connect with some of the other VC volunteers! To sign up today, reach out to Gail Seekins at gseekins73@comcast.net.

Visitor Center Volunteer Orientation

Speaking of connecting with other volunteers, thanks again to all those who came out for our Visitor Center Volunteer Orientation Days in June! We had 25 volunteers, rookies and veterans alike, participate in a short walkthrough on Visitor Center policies and procedures followed by a tour of ALL the trailheads on the refuge. Each day involved over 70 miles of driving and over seven hours, but by the end of it, each person was equipped to help out our visitors!

We will be hosting one last orientation day for the season on Friday, August 16th from 9am to 4:30pm. If you are interested in attending, please reach out to JJ at william_yarley@fws.gov.

Guided Programs

Check out our event calendar for our upcoming programs! This summer, we have programs happening nearly every weekend until October. Updates for these events will be posted on our website and Facebook page. Thanks to all the volunteers who are helping head some of these programs!

As always, if you have an interest in leading a guided walk, talk, or other interpretive event on a topic that interests you, please email JJ Yarley at william_yarley@fws.gov.
Wild School 2024

On May 23, we had 78 sixth grade students come out to the refuge for the conclusion of the annual Wild School program. Students from Davis-Thomas, Tucker Valley, and Harman schools learned about wetlands and their functions through hands-on activities, including planting trees, a cattail dissection, a live American kestrel demonstration and more!

We want to give a huge thanks again to the volunteers that made this day possible. The goal of the Wild School program is to teach students about the importance of wetlands and instill in them stewardship for the special resources around them. For many of these students, it was their first time visit the refuge. We were happy to make it a memorable one for them.

If you would like to get involved with Wild School next year or with other outreach opportunities on the refuge, consider joining the Environmental Education (EE) committee! As a committee of the Friends of the 500th, the EE committee helps plan and facilitate educational activities on the refuge. Our next meeting will be on July 16th at 11am at the Visitor Center. You can also reach out to JJ at william_yarley@fws.gov to get the link for the on-line meeting!

Story Time

Interested in getting little ones connected with nature? Join us for Story Time! On the fourth Saturday of the month through the summer, we are hosting a program for kids aged 5-8 that involves reading a short story about a nature-related topic followed with a simple craft. If you are interested in helping out, email JJ Yarley at william_yarley@fws.gov.

Past ACE intern Rebecca Foy reading a story to kindergartners by USFWS.

Wild and Witty

How does the heron like its coffee?

Answer on page 15
Visitors may have noticed changes to the landscaped area around the Canaan Valley Wildlife Refuge Visitor Center. What you are seeing is a five year plan to rehabilitate the demonstration planting beds to better reflect the diversity of plants growing in Canaan Valley. Construction of the new visitor center facility destroyed the previous garden beds allowing invasive species to take “root”. Garden volunteers and refuge staff have removed landscape fabric, weeds, and completely cleaned out about an acre of field around the center that is designated to become a wildflower meadow. Sneezeweed, Cardinal Flower, Native Sunflowers, Vervain, Iron Weed, Bee balm, are just a few of the native varieties that are transplanted in the beds. See if you can identify these beautiful natives as they bloom through the summer. The most obvious plant you will see this year is the buckwheat cover crop that is currently occupying the proposed wildflower fields. Eventually white flowers will bloom providing both necessary nutrients to the soil as well as preventing weeds from inhabiting the field before wildflower seed is planted later in the late fall.

What Mother Nature easily creates, takes us humans a lot of extra time and work to accomplish, hence the laying down of over 150 lbs of buckwheat, almost 30 bales of straw and over 70 hours of garden work with eleven people pulling weeds, rototilling and laying down seed. All of this will be repeated in the fall with the special wildflower seed mix especially formulated for the visitor center.

We invite visitors to stop by and watch the evolution of the garden. This is a slow but fascinating process as different successor plants will make an appearance over the next two or three years as the wildflower meadow slowly establishes itself.

There is plenty to do in the garden and volunteers are always welcome. If you are interested in learning about the ecosystem in the valley and like getting “hands on” work in the dirt, come join us! POC for the garden is Elizabeth Olmo, reachable at olmoed57@gmail.com. Please put “CVNWR Native Garden” in the subject line so she can respond to you quickly.

30th Anniversary Open House – August 10, 2024

Established in 1994, Canaan Valley National Wildlife Refuge is celebrating 30 years of conservation! Join us as we celebrate with an Open House event on August 10, 2024 from 10am–6pm. Look forward to guided walks, kids activities, presentations, food, fun, and more!

To help make this event one to remember, we are putting out a call for volunteers! Check out the list below and if any of these opportunities pique your interest, reach out to JJ Yarley at william_yarley@fws.gov.

Volunteer Opportunities:
- Set-up/Clean-up (4 volunteers)
- Parking (2 volunteers)
- Trash monitoring (1 volunteer)
- Assistant for Puddles the Blue Goose (1 volunteer)
- Tabling during event, including kid’s activities (9 volunteers)

Native Garden Update

Sneezeweed, Cardinal Flower, Native Sunflowers, Vervain, Iron Weed, Bee balm, are just a few of the native varieties that are transplanted in the beds. See if you can identify these beautiful natives as they bloom through the summer. The most obvious plant you will see this year is the buckwheat cover crop that is currently occupying the proposed wildflower fields. Eventually white flowers will bloom providing both necessary nutrients to the soil as well as preventing weeds from inhabiting the field before wildflower seed is planted later in the late fall.

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Puddles the Blue Goose making an appearance at the Refuge by USFWS.

Buckwheat quickly germinating to green up the space around the Visitor Center by Elizabeth Olmo.
Biology Updates and Volunteer Opportunities

Earth Day Tree Planting – April 20th, 2024

Our annual Earth Day Tree planting that took place on April 20th was a huge success! Over 40 volunteers showed up and quickly went to work planting over 600 trees in as little as two hours. Balsam fir and red spruce forests are habitats prioritized for restoration efforts here on the refuge. The dedication of these volunteers will benefit Canaan Valley for decades to come. Be on the lookout for our planting event next year!

Partnersing Together for Watershed-scale Restoration

The refuge, along with the Friends of the Cheat (FOC) and The Nature Conservancy (TNC), were awarded a grant from the National Fish and Wildlife Foundation. This grant, with assistance from FOC and TNC, will allow the refuge to complete several projects over the next three years, some of which have already been completed or started. These projects include:

- Planting 30,000 red spruce and 5,000 balsam fir on 115 acres. Completed this spring
- 60 acres of spruce release throughout the valley including partner lands.
- Moving a one-acre enclosure from private property to be installed around balsam fir and red spruce near Freeland Road to prevent deer browse.
- Installing Acoustic Recording Units (ARUs) to monitor specific avian species to establish baseline data for current and future management practices. Ongoing
- Stream assessment for brook trout along Freeland Run. Ongoing
- E-DNA collection of brook trout in several refuge streams to determine presence/absence.
- Remove four culverts and replace with bridges to promote aquatic connectivity in the upper reaches of Freeland Run.

AmeriCorps Roadside Clean-up

On May 14th, AFNHA AmeriCorps members Samantha and Robert had a trash clean-up for Canaan Valley National Wildlife Refuge’s Adopt-A-Highway program partnership. The designated area is two miles on Route 32 from the bridge by Timberline Rd to Black Water Rd. Most of the refuge staff participated, along with three other AmeriCorps members and a volunteer. The crew collected over 200lbs of trash and the WV Division of Highways had to pick it up over two days. While we were out, we where able to observe some wildlife including a green snake. Thanks to everyone who came out that day!
Logging Road Decommissioning Study

The refuge has obtained regional grant funding to conduct a study on the impact of decommissioning logging roads on salamander migration. When roads and trails are built, they can have a significant impact on the environment, particularly in terms of hydrology and soil moisture. The construction of roads and trails can disrupt the natural water flow, leading to changes in the hydrological cycle, which can result in increased surface runoff, erosion, and sedimentation in nearby water bodies. Additionally, compacted road surfaces can hinder water infiltration into the soil, affecting soil moisture levels, which in turn can affect plant growth and the overall ecosystem. Such changes in soil moisture can also impact the habitat of various organisms, such as salamanders, which rely on specific moisture levels for their survival and reproduction.

The refuge’s staff, in collaboration with the U.S. Geological Survey (USGS), has chosen a road in the new property in the northern part of the valley, which has been affected by logging activities and UTV/ATV use, for this study. Starting this July, staff will gather data on soil moisture and relative humidity, and mark red-backed salamanders with specific color codes based on whether they are found above the trail or downhill from the trail. Data collection will continue through the fall and winter, and the road will be decommissioned in March. After the road decommissioning, staff will resume data collection to assess salamander movement patterns.

Water Quality Monitoring

The water quality monitoring project helps the refuge monitor stream health and informs our management decisions. Currently, there are 29 water quality points between 9 routes. Routes can be run 1-2 times a month year-round and consist of walking long distances over uneven and wet terrain to streams all over the refuge. Monitoring includes taking widths and depths of the stream channel, measuring flow, pH, temperature, conductivity, dissolved oxygen, and turbidity. Retrieving data from each point year-round helps us see changes in water quality over time and understand seasonal variation. Our future plans involve eventually restocking brook trout in areas where water quality is great, and this monitoring is helping us determine that.

If you are interested in water quality monitoring and would like to learn more, please contact Samantha Grimes at samantha_grimes@fws.gov.

The study uses red-backed salamanders as a surrogate for the threatened Cheat Mountain salamander due to their similar habitat preferences. Photo by Becca Ferry/AFNHA.

Cindy Phillips recording water quality data by Samantha Grimes/AFNHA.
**Chronic Wasting Disease**

The refuge has been working with the National Wildlife Health Center and the WVDNR since 2019 picking up road-killed deer, dissecting them, and sending them off to be tested. We have collected over 80 deer, none of which have come back positive with CWD. We are over half way to our goal of 150 samples. This year alone we retrieved 15 deer. To prepare samples for testing, we remove the obex and lymph nodes. We also remove the jaw bone to aide in aging the deer. If you are out and about and see a roadkill deer hit along the road in Tucker County please call us at 304-815-3006, or email at robert_halle@fws.gov.

**Invasive Species Inventorying**

The ecological balance of our environment hinges on preserving the diversity of plant life. To achieve this, it is crucial to prioritize the growth of native plant species. Invasive plants pose a threat as they often overpower native species, leading to the dominance of invasive plant monocultures. By supporting the growth of native species, we can ensure landscape resilience and maintain biodiversity. The refuge is actively working to address various invasive plants such as stilt grass, garlic mustard, reed canary grass, autumn olive, and multi-flora rose.

As part of a regional program, the refuge is undertaking a comprehensive inventory of the entire area, using 50 x 50-meter grids. Volunteers and staff are conducting surveys and recording their findings using iPads. While significant progress has been made in prioritized areas like roads, trails, and waterways, our focus has now shifted to completing the inventory for the rest of the extensive grids within the valley.

It’s important to note that the inventory process does not involve any pesticide treatment. We are looking for volunteers who are willing to learn about plant identification and are comfortable walking on and off trails. The application on the iPads is user-friendly and easily accessible to all.

Joining us this summer are two ACE invasive interns, Hallye and Trinity, who will play a vital role in treating and inventorying invasive plants. If you are eager to join our efforts, please reach out to Caleb Stutler at caleb_stutler@fws.gov. Your participation can make a significant impact on our conservation efforts.
From June 17th to June 28th, the refuge welcomed three members of the region’s Great American Outdoors Act (GAOA) team. This team travels all over the region to help refuge’s with various maintenance projects. These members have completed a tremendous amount of work during the time they were here. Working alongside Daryl, our equipment operator, they managed to complete two bridges on white grass trails, install two new kiosks at Beall and Camp 70 trailheads, stripe the visitor center parking lot, and help complete the bridge out on Glade Run Trail!

The refuge is looking for a Volunteer Adopt-A-Trail Coordinator. This coordinator would train and work with the trail monitors that routinely hike the refuge trails to create a monitor report. These monitor reports are important to assist the refuge staff with identifying deficiencies on the trails. The coordinator would merge these reports into a single document and assist the refuge staff to create a plan for repairs. The coordinator should expect to commit approximately 30 minutes a week to compiling trail monitor reports and two hours per month meeting with refuge staff. If you are interested in volunteering for this position, please contact matthew.boarman@fws.gov.
**ADA Hunt Blind Construction**

The Nature Conservancy applied and received a grant to add two additional ADA-accessible hunt/nature photography blinds off of A-Frame road. These two blinds will be built on the new recently purchased property and will help those with mobility issues enjoy wildlife-dependent recreational opportunities such as hunting and wildlife photography. The grant covered the purchase of supplies and materials, but we are going to need some help building them! Please stay tuned for a call for help as we move forward with building these blinds.

![Site Plan](image)

The site plan for the ADA-accessible hunt/photography blinds.

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**Friends of the 500th - Friends President**

**Volunteers:** get more out of your experience at Canaan Valley National Wildlife Refuge, and help sustain its work on biology, conservation, and education. Join the Friends of the 500th, a non-profit organization in support of CVNWR. Our local Friends group was formed in 1996 and has contributed in many ways to our refuge and community.

We currently finance tree planting on the refuge, offer local students educational field trips in our annual Wild Schools, and support two AmeriCorps members who assist the Refuge staff in biological research and other areas.

As a Friends member, you'll receive our bimonthly newsletter, the Timberdoodle, which is filled with all-local content from our community's talented writers. To join the Friends, send a check ($15 individual; $25 family) to:

Friends of the 500th, P. O. Box 422, Davis, WV 26260.

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**Wild and Witty**

How many types of wetlands can be found in Canaan Valley?

**Answer on page 15**
In Fiscal Year 2022 (FY22), volunteer contributions were extensive, rebounding from prior pandemic conditions. During FY22, 18,680 volunteers gave 929,493 hours of their time to the Service. That’s more hours than are worked, on average, by 440 full-time employees work hours valued at nearly $27.8 million.

Volunteers are integral to fulfilling the mission of the Service. Volunteers are highly valued for the work they do, as well as the perspectives, experiences, and skills they bring to our agency.

Wild and Witty Answers

1. On the bitter-n side!
2. There are 23 types! Including bogs, fens, shrub swamps, wet meadows, and more!