

Lehigh Valley Group Sierra Club

Introducing our new Newsletter

It has been a few years since we have reached out to communicate with our Group membership in this way. The newsletter is to inform our interested followers and fellow Sierra Club members about activities we are taking and to welcome your involvement or comments. Those who seek volunteer opportunities please check out the articles and contact the writer of the article or anyone on the Executive committee (see page 6). Please also feel welcome to join our monthly zoom meeting.

VOLUNTEERS NEEDED!

The best way to get our zoom link is to find the Lehigh Valley Sierra Club Meetup page and RSVP. [Upcoming events | Sierra Club Lehigh Valley Group \(Bethlehem, PA\) | Meetup](#) If you are not already a Sierra Club member please join us [Lehigh Valley Group | Sierra Club](#) Thank you.

Sierra Club in an Effort to Create Pennsylvania's First National Park

The Pennsylvania Sierra Club has helped create a wide-ranging effort to upgrade the Delaware Water Gap National Recreation Area's (DelWGap) 70,000 acres to become Pennsylvania's (and New Jersey's and New York's) first National Park and Preserve: the "Delaware River National Park and Lenape Preserve".

The project was jointly begun by the Pennsylvania Chapter and the New Jersey Chapter of the Sierra Club and is led by retired DelWGap Superintendent and 35-year National Park Service veteran John Donahue. Donald Miles, Pennsylvania Sierra Club co-chair and John Kashwick, New Jersey Chapter vice-chair, coordinate those organizations' work on the effort. The project has been joined by a number of PA and NJ environmental, land use, and sportsmen's groups and has had extensive favorable newspaper, radio and tv coverage in both states. The effort requires Congressional approval and is envisioned to take a year or two.

42 million people live in Pennsylvania, New Jersey and New York yet the nearest National Parks are in Maine and Virginia. Only 11 of the 64 National Parks are in the Eastern US. Over 4 million people visit DelWGap annually, about the same number as visit Yellowstone National Park, yet DelWGap receives less than a third of the funding Yellowstone receives -- and DelWGap's roads, parking lots, beaches and infrastructure suffer from that deficiency.

The effort envisions a Park and a Preserve, on both sides of the Delaware River (the longest un-dammed river in the Eastern US, a National Wild and Scenic River) the Preserve to permit hunting as is now allowed in much of the DelWGap Recreation Area. . It will also include an area to honor the Lenapehoking, the traditional lands of the Lenape Nation, a center of which was in what is now the Delaware Water Gap National Recreation Area.

- by Don Miles

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Special points of interest

- Toxic tributary in Lehigh Gorge State Park
- Outdoor observation bee hive deployment plans
- PM2.5 Monitoring in Lehigh Valley has startling results
- 100 new trees taking root along Jordan Creek in Orefield

Political report -

Just a reminder that 2022 is an important election year, with the two major parties closely divided, and the election (for the first post-2000 census US Congress with changes in state shares of the US House of Representatives--from newly drawn districts) will determine partisan control of the US Congress for the second half of the Biden administration. Pennsylvania is a key swing state, closely divided, with an open seat in the US Senate, and a reduction of one House seat. The Lehigh Valley has one of the closely watched House races for the seat held by Democrat Susan Wild. The newly drawn 7th district has added sections of Carbon County, making the district more Republican, and likely a very close race. Sierrans will want to [register](#) to vote in the [May 19 party primary election](#) by the May 2 deadline, and prepare to support the candidate of their choice in the [November 8 general election](#).—by Al Wurth



Toxic Metal Filter Installed to Protect Buck Mountain Creek

The Buck Mountain #2 Tunnel in Weatherly was the site of a \$500,000 project to treat the high aluminum discharge from the tunnel. Unfortunately, the system is bypassed due to a liner leak resulting in aquatic toxicity along the 3 miles to the Lehigh River confluence at Rockport in Lehigh Gorge State Park. Repair of that leak has been a goal for the last couple years and progress has been made but more work is being planned.

Once the system is back on line and aluminum drops out of solution it settles on the limestone and this must be periodically flushed out of the system. However, the original design did not include any means for aluminum solids removal. To address this, a suspended solids filter (Fabco Stormbasin) was

installed at the treatment system outlet pipe. This will filter flows up to 400 gpm and retain suspended aluminum in the four cartridge filters that will need to be periodically replaced.

To the casual observer, the impaired stream looks healthy, the water is clear and cold. However the dissolved aluminum will suffocate any aquatic organism with gills. It seems that helping alert the public to this preventable state of affairs is a good first step in the remediation process. —by Matt MacConnell

AMD Site & Filter Installation video:

<https://youtu.be/xJKKtPVSoiQ>

“wild trout populations diminished”

Honeybee Observation Hive

The Sierra Club Lehigh Valley Group purchased an observation hive from Draper Super Bee Apiaries in Millerton, PA and have plans to install this at the Lehigh Gap Nature Center in Palmerton. An Eagle Scout project is helping with some carpentry and a nuc (bee colony



with queen) has been ordered for placement in April. Please let us know if you are interested and visit the Lehigh Gap Nature Center to check it out.

VOLUNTEERS NEEDED!

Aquatic Life Destroyed in Buck Mountain Creek

The Buck Mountain Tunnel discharges 7 ppm Aluminum, which is 10 times the acute toxicity level for aquatic life. This flows into the Buck Mountain creek rendering this tributary toxic to aquatic life. Documenting this impairment provides a technical basis for taking action. It is unfortunate that abundant wild trout populations in multiple feeder streams cannot migrate south to the Lehigh. These trout are prevented from migrating to the Buck Mountain Creek due to the toxicity block and wild trout populations are diminished.

The good news is that a treatment system has already been constructed and is capable of removing 99% of the aluminum from the water. All we need to do is repair the leak in the limestone pond, a relatively trivial maintenance task but the custodians of the site, Wildlands Conservancy, have so far refused efforts to give permission to effect the repair. Our team will continue outreach to hopefully obtain a green light to repair the liner leak. Once the leak is repaired and the treatment put back on line, toxic conditions should fade and trout populations returned to this stream. —By Matt MacConnell

Video of stream impairment measurements: <https://youtu.be/1-7rifHSMQO>

VOLUNTEERS NEEDED!

Buck Mountain Creek Toxicity Study





Water quality probe and modem at the Laurys Station monitoring point on the Lehigh

Water Quality Monitors in the Lehigh River

One way to know if the rivers around here are getting cleaner or staying clean is to monitor water quality parameters round the clock. This is what we do each year with two water quality monitors. Both monitors are placed in the river in two locations and both have cellular modems that feed the data to a web page where a user friendly application enables users to present the data in ways that are meaningful. The monitors reveal interesting normal riverine cycles but also serve a watch dog function. Recently we observed a pollution event that persisted nearly 2 weeks where total dissolved solids skyrocketed and reported our findings to DEP.

We are now in the process of assessing damage to both probes from the high water experienced in September 2021. The remnants of Hurricane Ida raised levels in the river so high that both probes were just barely able to hang on without being lost in the torrent. There were some damage to the cables on both probes and the sensor cage was lost on one of them. The probes now back at the vendor in Colorado for service so that they are ready to deploy in March 2022. The two water quality monitor program is done in collaboration with the Lehigh River Stocking Association ([Lehigh River Stocking Association - Catch Us On The Lehigh \(Irsa.org\)](http://LehighRiverStockingAssociation-CatchUsOnTheLehigh(Irsa.org))) and expenses are shared with them. Last year LV Sierra Club purchased our own monitor that is also available for surface water monitoring. This monitor was used for the annual tributary survey last year and was also used for monitoring of Buck Mountain Creek AMD impairment. Anyone interested in helping us with the water quality monitoring program please contact us.— by Matt MacConnell

2021 Trib Survey Video : <https://youtu.be/D9LIV7ie1mA>

PM2.5 Monitors Deployed in Lehigh Valley

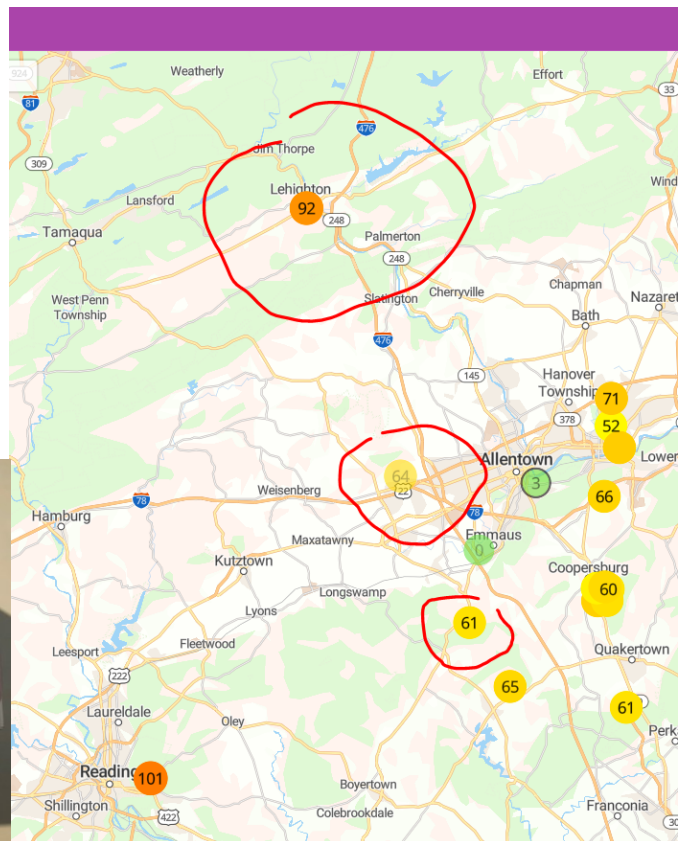
Three purple air monitors are operating over the last two years and a fourth is ready for deployment once technical issues are resolved. The image to the right is what the sensor looks like and if you go to the purpleair.com site and click maps you can find our sensors. The screen shot to right point them out; one in Lehigh, one in Orefield and one in Powder Valley, in this image they are reading 92, 64 and 61. This is a 10 minute average air quality index of particulate matter 2.5 microns. Readings between 51 and 100 are considered acceptable but could be problematic for people with respiratory issues.

The data is trended on the purpleair.com web site and it is downloadable for viewing data or data analysis. We hope to see what the normal levels are in the Lehigh Valley and to try to see if there is a correlation to increased truck traffic due to the proliferation of warehouses in our area.

Please contact us if you are inter-

ested in reviewing the data and helping to formulate our monitoring program goals. —by Matt MacConnell

[PurpleAir | Real Time Air Quality Monitoring – PurpleAir, Inc.](http://PurpleAir.com)



VOLUNTEERS NEEDED!

Tree Planting in 2021

The Lehigh Valley Group planted 100 native trees and shrubs along a 1 miles reach of the Jordan Creek in Orefield, just south of the Trexler Game Preserve. This project was in collaboration with Lehigh County Parks and has provided riparian stream bank stabilization by planting: 10 silver maple, 20 red chokeberry, 10 river birch, 10 ironwood, 20 silky dogwood, 10 swamp oak and 20 arrowwood viburnum.

In September high water from remnants of hurricane Ida flooded the bank in the planting area but only about ten plants were lost.

VOLUNTEERS NEEDED!



Ricky Park Native Plant Wetland Garden

In August of 2019 the LV Group constructed a wetland system at Ricky Park in Orefield. This project diverted a spring that was previously routed to a culvert along the road that township sprayed herbicide on it each year to keep plants from growing. Now the water feeds a lined pond area about 80 ft long by 30 ft wide that has aquatic emergent native plants as well as perennial flowering native plants.

The challenge has been to see how well the native plants hold up against the visiting plants that invade each year. The three invaders that have been problematic are chickweed, jewelweed and thistle. We are looking for volunteers interested in helping manage this native plant garden.

A partial list of the natives planted in the wetland are: Joe Pye weed, black eyed susan, blue lobelia, button bush,

marigold, cardinal flower, arrow arum, pickerel weed, duck potato, lizard tail, sweet flag, tussock sedge, blue flag iris, bee balm, switch grass, sunflower, goldenrod, yellow twig dogwood, purple coneflower, white turtlehead, winterberry holly, mountain mint, swamp milkweed and more.



Summer view of the wetland garden



In summer of 2020 we weeded the garden and pulled enough weeds to fill a pick up truck bed. Last summer we did no weeding just to observe how it would do. It seems that based on these two approaches maybe the best approach is to weed out the thistle, chickweed and jewelweed early in the year before it has a chance to proliferate. Probably need to plan to do some work in May 2022.

This project represents a successful collaboration between Sierra Club and the local community and Upper Macungie Township parks management. —by Matt MacConnell

sensitive and royal fern, monkey flower, red monarda, new England aster, spice bush, red chokeberry, winterberry holly, rush, marsh

VOLUNTEERS NEEDED!



Taking Back the Power from Industrial Agriculture

As I begin, I find myself wanting everything to be perfect, to know everything before I even get started: what plants to choose, seed starting, garden design, composting, planning a continuous harvest. How humbling to know it won't be perfect, that I will make mistakes in this grand experiment of getting to know the land in the place that I'm in. Through this garden, I will be taking back the power of growing my own food from the industrial agriculture that has polluted our air, water, land, and bodies. Things are starting to fall into place: My apartment complex has a community garden, a local library has a seed lending collection, and YouTube has a multitude of tutorials, of course. What I know so far is that my garden will be a resilient ecosystem, with each plant fulfilling it's important role in supporting the others. There will be carrots rooting and breaking up the earth, strawberries as a ground cover holding moisture in the soil, and sunflowers supporting a latticework of vining plants like beans, which in turn renitrify the soil. How thrilling it is to begin. - by Laura Navitsky

VOLUNTEERS NEEDED!

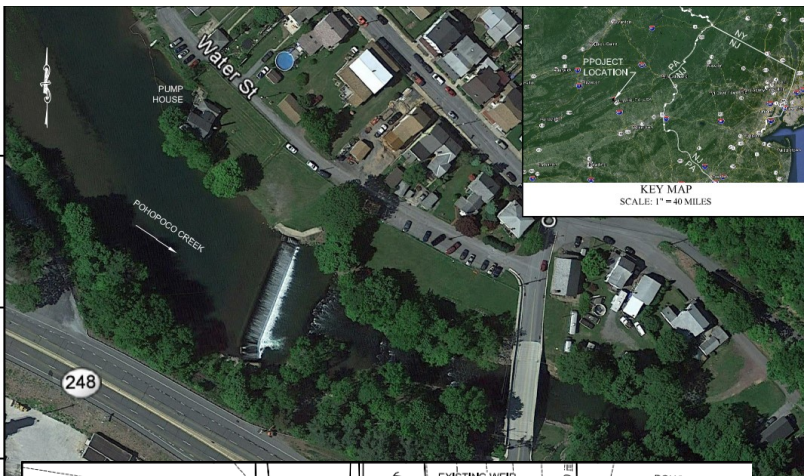
Parryville Dam Removal or Fish Passage

The Pohopoco creek is the source of water to Beltsville Lake and the cold tailwater from Beltsville lake dam provides a cold water fishery second to none in the Pohopoco creek. Five miles of EV stream meander south toward the Lehigh River where the dam pictured below is located, about 100 yards from the Lehigh confluence. This 200 ft wide x 9 ft tall impoundment prevents trout migration from populations above or below the dam. The cold water of the Pohopoco creek provides thermal refuge to Lehigh trout and spawning habitat but the dam prevents access to the exceptional value trout habitat.

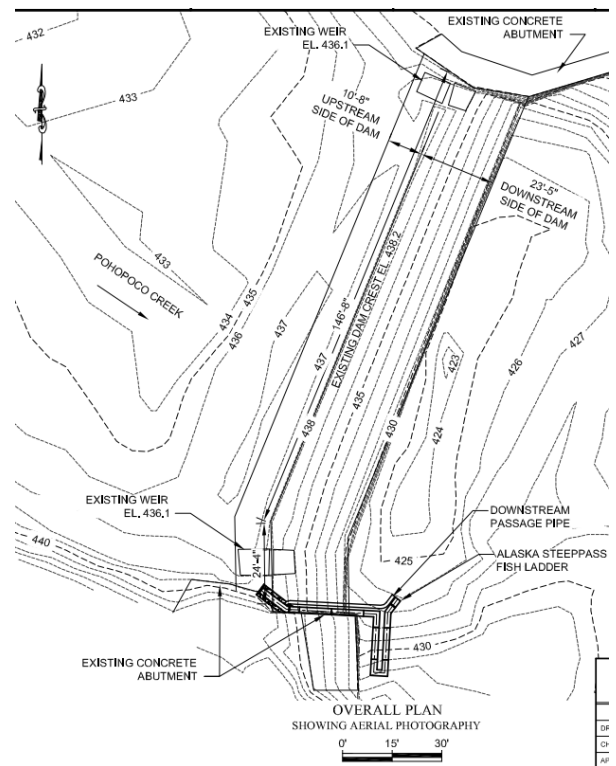
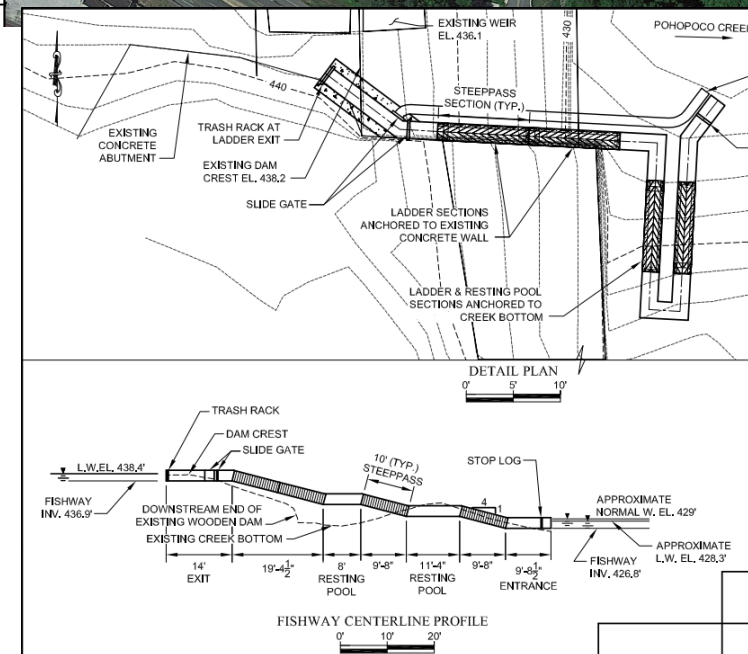
The dam owners, Palmerton Borough, have voted to permit a study for fish passage on the dam and SC has engineered plans for an Alaska Steeppass Denil type fishway (see design drawings our project produced below). This \$250,000 project has not yet been approved by the Zinc Superfund settlement. In the last two years, the Palmerton borough has attempted to use a well to supply water rather than use the siphon that drains water from behind the impoundment. This would enable them to exit the dam business and the dam could be auctioned off and removed, which is the best possible solution. However the well water had total dissolved solids of 1,100 ppm which exceeds discharge permit limits of 1000 ppm. Given that the water is not useable by Horsehead industry for their cooling water needs, which would discharge the water to the Aquashicola Creek, the well water is not usable and the dam is still needed.

We are in a holding pattern now to see if we should work on dam removal or fishway projects. Aquatic Organism Passage (AOP) is a priority for the PA Fish and Boat Commission and obviously to the Sierra Club as well. Sierra Club continues efforts to see that fish species will once again be able to migrate to/from the Lehigh River. The AOP will permit resident trout populations from above and below the dam habitat access. The Pohopoco Creek tailwater is an exceptional value cold water refuge suitable for spawning and overall contribution to wild trout populations.—by Matt MacConnell

VOLUNTEERS NEEDED!



“Sierra Club continues efforts to see that fish species will once again be able to migrate to/from the Lehigh River”



ReCharge LV– Electrifying the Valley’s Transportation

As climate, environment and health concerns are all reaching new peaks, the need to drastically reduce our emissions is more pressing than ever. Transportation accounts for almost a third of our emissions and pollution, contributing to a multitude of health impacts and perennially fouling our environment and communities. Switching our cars and trucks over to electric could greatly reduce our local pollution and improve our air quality and health.

While public interest in electric vehicles is increasing, concern over range anxiety is legitimate and we need many more public EV chargers. Even with 90% of EV charging is done at home, drivers need public stations to assure them that they can find the electrons necessary to get them home. Even with the few EV chargers around the Valley now, it’s not nearly enough.

There are financial incentives to install EV charger, however. Pennsylvania DEP’s Driving PA Forward program offers a 70% rebate for Level 2 EV chargers (courtesy of the Volkswagen settlement) for non-governmental entities. In addition, the federal 30% tax credit for “alternative fueling” systems. These two coupled by themselves can offer a nearly cost-free opportunity for commercial entities to install EV chargers on their property.

By installing EV chargers, commercial locations like the Lehigh Valley Mall and Promenade Shops could offer drivers of electric vehicles reason to park for a couple hours to charge up and shop. Movie theaters and destination locations are natural fits as well. The benefits health networks realize go well beyond the economic, as fulfilling their mission may reside in their effort improve the health of those in the community.

We have an opportunity to significantly reduce our emissions and clean our communities through the expansion of electric vehicles, and commercial buildings can play a huge part in that. We just need to motivate them. – Brian Hillard

[Home](#) | [RechargeLV](#)

VOLUNTEERS NEEDED!

Lehigh River Pedestrian Bridge

The local club is now in its sixth year of promoting the construction of a safe and environmentally rich pedestrian/biking bridge across the Lehigh River. Linking the North and South sides of the City of Bethlehem, the bridge promises to become a hedge against traffic congestion, the demand for parking spaces, and the effects of climate change challenges in the future city of Bethlehem.

The pursuit of the bridge has been a lively and evolving piece of urban environmental activism. Our concept of the bridge has steadily evolved as it has passed through numerous public meetings, changing community issues, and the current professional feasibility study by WRT consultants. The latest iteration of the bridge as the foundational element of a safe, inner city biking and walking infrastructure is perhaps the most purposeful and exciting vision. Sometime in the next few months, we will begin to receive recommendations on the placement of the bridge and the costs involved in constructing it. For more information on the local Sierra Club’s latest positions and activities concerning the pedestrian/biking bridge contact the writer.

By—Doug Roysdon

VOLUNTEERS NEEDED!

Lehigh Valley Group Sierra Club and Executive Committee

Lehigh Valley Group Sierra Club
PO Box 126
Trexlerstown, PA 18087

Serving Carbon, Lehigh, Monroe and Northampton Counties

<https://www.sierraclub.org/pennsylvania/lehigh-valley>



Chair, Chapter Delegate, newsletter editor	Matt MacConnell	610-657-2707	mattmacconnell@gmail.com
PA Chapter Vice Chair	Don Miles	610-730-2514	donmiles42@icloud.com
Political Co-Chair	Al Wurth	610-866-9846	ahw1@lehigh.edu
Alternate Chapter Delegate	Andy Unger	610-406-2088	drnbscreen@gmail.com
Treasurer	Dave Reber	610-798-0484	grimreber@gmail.com
Secretary	Marilyn Jordan		Mjordan.eco@gmail.com
ExCom Member	Doug Roysdon	610-653-3462	dougroysdon@gmail.com
ExCom Member	Laura Navitsky	484-274-9903	lauranavitsky@gmail.com
ExCom Member	Brian Hilliard	610-762-4849	bshillard@outlook.com

MEETING LOCATION and TIME: The "ExCom" meets each month virtually via zoom meeting. Please rsvp at our Meetup page or on Campfire. All are welcome to attend.