



Somerset County Conservancy A Charitable Trust

www.somersetcountyconservancy.org

Newsletter

Spring / Summer
2014

Somerset Lake Festival

On Saturday, **June 14, 2014**, the Somerset Lake Action Committee will sponsor a festival at the lake from **11 to 5**. Activities will include a food vendor, kid's tent, hikes, birding activities, paddling outfitter, and opportunities to paddle canoes or kayaks supplied by the PA Fish and Boat Commission. There will also be a group of carp fisherman from several states coming in to demonstrate the techniques to catch these sometimes huge fish.

We are encouraging all to attend and bring a friend. This should be a fun day and we want to get a lot of press to show that our community really does care about Somerset Lake. This will be very helpful in our efforts to fix the dam and create a county park.

Hope to see you there!

Inside this issue:

Somerset Lake Action Committee	page 2
CONSERVANCY TREATMENT SYSTEM	Page 3
Species Spotlight	Page 6
WSB Pledge	Page 7
Carp Anglers	Page 8
Spring Arrivals	Page 10
Kantner Iron & Steel	Page 11



Conservancy Fundraising

The Somerset County Conservancy has not had annual fund drives and has met its annual budget with membership dues, occasional grants and money raised through the **Roadrunners Birding Team's** pledges to the SCC. This may be the last year for the team to participate in the World Series of Birding. We encourage everyone to send a pledge to benefit the SCC by filling out the Pledge sheet on **page 7** of this newsletter.

Thanks for the support!!

Somerset Lake Action Committee Update

Jeff Payne

Somerset Lake has enjoyed an active spring bird migration with over 30 species of waterfowl and numerous Bald Eagles and Osprey. Some of the more uncommon waterfowl included White-fronted Geese, Cackling Geese, Red-necked Grebes, Long-tailed Ducks and White-winged Scoters. Seeing this spectacle increases our desire to find a long term solution to fix the dam and insure that birds (and people) will continue to be able to use and enjoy this important resource.

The SLAC subcommittee has been very active since our last newsletter. We have met with business and community leaders, our elected officials and the PA Fish and Boat Commission. Our county commissioners are very interested in leasing the upland area surrounding the lake for use as a county park. The vision is to complete the hiking trail around the lake, create picnicking areas, and perhaps to have a boat livery with canoes, kayaks, and other non-powered boats for rent. The Fish Commission would continue to manage the lake for fishing and boating. This would make the lake more user friendly and provide recreation for local residents and a spot for visitors. Increasing recreation will bring more business to the busy turnpike interchange area which is only ½ mile away. But for all this to happen we need to see the dam fixed and that means the money needs to be found.



The PA F&B Commission is going to receive money from the recent gasoline tax increase. The extra money obtained from motorboat fuel for the next five years is dedicated to fixing unsafe dams. Unfortunately, only about half the total money needed for the existing unsafe dams will be generated in this way. We need to find some state general budget money to supplement the gas tax funds. We

have written the governor to ask for capital budget money. There are other efforts being started to help find the money needed for this project.

We need support from the community and indeed anyone who uses or understands the importance of this lake. Letters can be generated through links on the SCC website or by directly going to www.somersetlakepa.org. Donations can also be made through the website. One local businessman, **John Toth** of

Kantner Iron and Steel, has agreed to make a contribution for every customer at his business! Thanks John! Another fun way to support SLAC's efforts would be to come to our Somerset Lake Festival on June 14.

REFURBISHED CONSERVANCY TREATMENT SYSTEM OUTSTANDING PERFORMANCE

by Dan Seibert

HISTORY

The Conservancy mine water treatment system located on Lamberts Run adjacent to the Flight 93 Memorial Park was rebuilt this past summer. The original system was constructed in 2000. Since its original construction, two things happened that caused the system to slowly become ineffective in treating the mine water. First the volume of flow increased and secondly the chemistry of the water became more acid with increased metal content. The increased flow along with increased aluminum levels plugged the limestone bed designed to neutralize the acid and precipitate the aluminum. Infrequent maintenance flushing of the limestone bed also added to the decline of the system performance.

WATER CHARACTERIZATION AND TREATMENT

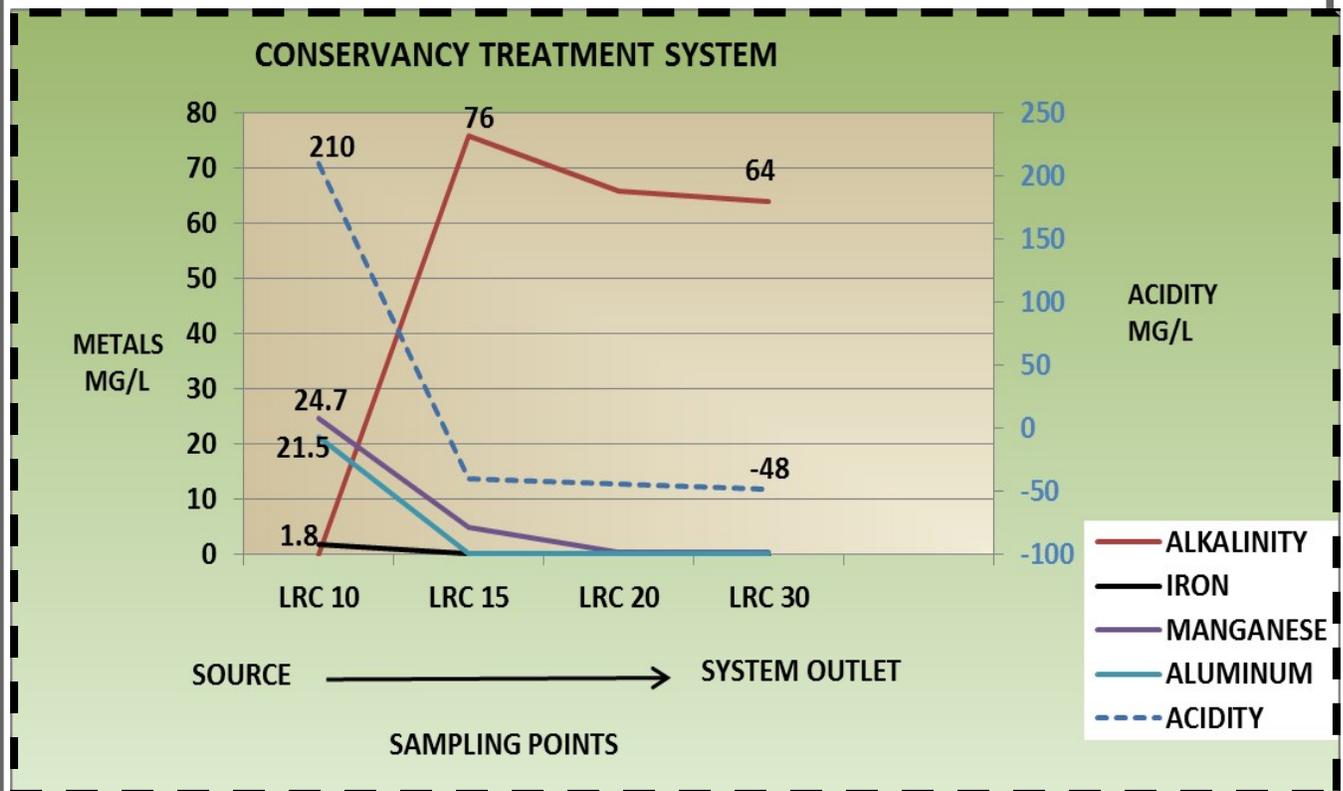
The water at this discharge is much different than the Heinemyer discharge and the Flight 93 discharge located nearby and upstream from the Conservancy discharge. The water flow rate being treated by this system ranges from 40 to 100 gallons per minute (GPM) and averages about 70 GPM. The raw untreated water at the Conservancy site has a pH of 3.5, acidity of 210 MG/L, aluminum of 21.5 MG/L, manganese of 24.7 MG/L and iron levels of 1.8 MG/L. Treatment of the acidity is accomplished by raising the pH of the water in a bed of limestone rock. Raising the pH also causes the iron and aluminum to precipitate or come out of solution and settle in a settling pond below the limestone bed. Raising the pH is a difficult task because every milligram (MG) of aluminum that precipitates produces about 5

MG of additional acidity which lowers the pH. Iron also produces acidity at a rate of 3 MG/L when it precipitates, or come out of solution. To overcome all of this acidity, the raw water must reside in the limestone bed, long enough to neutralize the acidity. Manganese is very difficult to remove from the water because a pH of 10 is required to

cause it to precipitate. Manganese is not a toxic element to aquatic life so its removal is not of a great concern.



The graph clearly shows that the new system is removing 210 MG of acidity and producing 48 MG of additional alkalinity for a total alkalinity production of 258 MG (210+48). This is exceptional alkalinity production for a passive treatment system. The graph also shows the complete elimination of the iron and aluminum as the water flows through the system. You may notice that the system is removing the manganese, which I mentioned earlier, that it is very difficult to obtain pH levels high enough to cause it to precipitate. (note: metal concentrations are shown on the left vertical axis and acidity is shown on the right vertical axis of the graph)



UNEXPECTED BENEFIT

The removal of the manganese is probably occurring because of the colonization of the limestone bed by manganese eating bacteria. These bacteria occur naturally and when they colonize a system, the observed results are usually increased alkalinity production and removal of the manganese. Any additional alkalinity entering Lamberts Run is a benefit to the aquatic life in the stream.

INNOVATIVE OPERATION

As I mentioned at the beginning, one of the causes of the original systems demise was infrequent flushing of the limestone bed. Accumulations of aluminum in the limestone quickly fill the voids in the rock if frequent flushing is not performed. The new system employs innovative, yet simple, technology that automatically flushes the limestone bed every day. The limestone bed has a grid of perforated pipe under the limestone. These pipes are connected to a mechanism called a “bell siphon” situated in a concrete box structure outside and below the limestone bed. As water flows through the system, the water level rises in the concrete box structure, the rising water compresses air trapped in the bell siphon. When the concrete box structure is nearly full of water, pressure inside the bell siphon rises causing a valve to open. At this point all of the pipes are completely filled with water so a siphon is created in the pipes under the limestone bed. The water in the limestone bed completely flushes taking along with it all of the precipitated metals, aluminum and iron. The pipes carrying the flush water out of the siphon are 12 inches in diameter. A complete flush of the limestone bed takes about 40 minutes to complete.

The water becomes clear after about 25 minutes into the flush which means all of the precipitated metals have been removed from the limestone. The water flushes into a settling pond with a baffle that prevents any of the flushed precipitate to enter Lamberts Run.



All of the new construction was completed in front of the existing system. This configuration allowed the existing system to be used as an additional settling pond and wetland .

CONSTRUCTION COST

The engineers estimate for the refurbishing of the Conservancy system was \$126,000.00. Earth Shapers, LLC was the low bid contractor, who completed the project for \$115,000.00.

Species Spotlight: Tree Swallows (*Tachycineta bicolor*)

By Trish Miller

In my mind, Tree Swallows are the true harbingers of spring. These small insect-eating aerialists arrived in Somerset County on April 1st this year from their wintering grounds along the southern coast of the US to Costa Rica. During a cold spring morning, before they begin nesting, hundreds can be found feeding over Lake Somerset. They streak over the lake feeding on tiny bugs emerging from the water and skimming sips of the cool lake water.

Tree Swallows are amazing fliers and birds of the open country, They nest in existing tree cavities, thus their name, but they will also readily use nest boxes. Many utilize the nest boxes along the bluebird trail at Kimberly Run Natural Area. We have a dozen or so boxes scattered throughout our yard that are filled with swallows and the occasional Bluebird and House Wren. I love to hear the commotion during the early nesting season when the swallows are vying for the best boxes – fighting with anyone that gets in their way! Once a male selects a box, females will select a mate. Within two weeks of pairing, the female begins nest building by lining the nest box or cavity with grasses. Both parents collect feathers and meticulously add them to the nest after 3-7 eggs are laid. The female begins incubating after the last egg is laid, which allows for synchronous hatching of the eggs after 14 days. Once the nestlings hatch, loud chattering can be heard each time their parents bring food to the box. As they near fledging, tiny heads peak out of the nest box holes to examine their surroundings. The nestlings move about the inside of the box, exercising their wings in anticipation of their first flight 18 – 25 days after hatching. When they day finally comes to leave the nest, the young birds are as large as their parents. Though often clumsy, especially when it comes time to land, the young are able to fly.

Once the young have fledged, the swallows spend a few days in our yard before they move to more fruitful areas across the county. It is sad to see the vacant boxes, but the second broods of House Wrens and Bluebirds provide a couple more months of entertainment before the Tree Swallows depart heading to warmer climes where insects abound during the winter months. They exit the higher latitudes from August – mid-September, heading to their southern wintering areas. They migrate in loose groups, but roost in incredible numbers at some locations, especially at coastal sites during autumn migration. When we visit Cape May, NJ during autumn, on the top of my list for sights to see is the tornado of migrating Tree Swallows as they descend into their night roosts. It is like nothing you have ever seen before and well worth the trip. Thousands upon thousands of swallows appear in a very short period of time over reed beds swirling around in a loose flock. Suddenly, they group tightly together acting more like a single organism than thousands of individuals, and in what feels like a blink of the eye, they disappear from the sky into the reeds. If you have never seen the phenomenon it is one of nature's true wonders. Check out this video (but go see it in person!):

<http://vimeo.com/79165567>

Once the Tree Swallows are gone, it is not long before the leaves begin to fall and winter engulfs our county. When I look across our snowy yard, I often think of the Tree Swallows' return, and anticipate the repeating of the cycle, which, to me, is one of the best things about living at a temperate latitude.

If you are interested in attracting these phenomenal fliers to your yard, you can find more information and nest box designs here: <http://www.treeswallowprojects.com/>





2014 WORLD SERIES OF BIRDING

The Roadrunners have been migrating to New Jersey since 1988, running around the marshes, woods, fields and shorelines collecting as many ticks as possible on the species list in a frantic 24-hour search. Their efforts, in cooperation with all of the support of you, the generous benefactors, has resulted in over \$80,000.00 of direct support to the Somerset County Conservancy, Allegheny Plateau Audubon and The Nature Conservancy. That is a lot of land preserved, projects completed, and studies performed. And the migration to NJ, is slated to occur one more time . . . one last time.

Times are changing over the last quarter-century, and next year the Roadrunner migration routes are unclear. Which makes this year even more important to finish with a bang! Jeff and Chris Payne and Kim VanFleet will scour up birds while Neal Cantrell will return to drive the byways and backroads of Cape May County on May 10. The goal is to find 160 or more species and collect over \$6,000.00 to help SCC continue the Hemlock Woolly Adelgid Project at Kimberly Run Natural Area, TNC adopt more acres and APAS maintain Dunning's Creek wetlands.

We promise a good effort and exciting follow-up report. Can we count on your generous pledges to spur us on? Thank you in advance!!

Name: _____

Address: _____

Phone: _____

I wish to pledge:

10 cents _____ 25 cents _____ 50 cents _____ \$1 _____ \$2 _____ other _____
per species.

I prefer a straight pledge of \$_____

I would like to support: Somerset County Conservancy _____ (checks should be made out
Allegheny Plateau Audubon _____ out to the organization)
The Nature Conservancy _____

Please send to Jeff Payne at 9755 Glades Pike, Berlin, PA 15530

OR email paynemt@chilitech.com **ASAP**

Carp Anglers Group (CAG) Fish IN

By

Len Lichvar (reprinted from the Somerset Daily American)

Among the many outdoor related activities being set for June 14 at the Somerset Lake Action Committee (SLAC) sponsored "Lake Fest" at Somerset Lake is the return of the Carp Anglers Group (CAG) Fish IN. CAG has sponsored carp fishing events at Somerset Lake in the past. A Fish In is not a competitive tournament, but rather just a group of anglers, focused on catching carp and promoting their sport.

The carp anglers, who fish from shore, will stand out because their equipment and tactics differ greatly for that of anglers looking to hook up with the many other species of fish that inhabit the lake. They use rods, methods and tactics and bait that have been developed in Europe, where carp fishing is a prized sport. The popularity of angling for these non-native species is now just becoming more mainstream in America with over 3 million carp anglers and growing.

Brian Wingard, of Hollsople, is an internationally known author and expert on carp angling. He fishes almost exclusively for carp throughout the year locally and beyond.

In regard to Somerset Lake Wingard says, "The lake holds a lot of large

fish that makes people understand that it is a fishing destination point. There will be carp anglers coming to this event from out of state and they know there are carp up to 30 pounds in the lake. The scenery is also outstanding and the carp methods that are used also result in the landing of many catfish as well."

Anyone who would like to watch or learn about the techniques and strategies of carp fishing need only visit with the CAG members at the lake who are always more than willing to discuss their methods and demonstrate their skill in hooking and landing this challenging gamefish. Just like other angling there is no assurance that they will be successful, but previous outings at the lake have proven that these anglers have exceptional ability to catch the normally shy and wary carp. The one thing that is certain is that if they are successful they will be catching the largest and heaviest fish that anyone will land that day.





PENNSYLVANIA AMPHIBIAN & REPTILE SURVEY (PARS)

by Lester Brunell

Pennsylvania began a 10 year (2013-2022) study of these creatures last year. The state is encouraging the public to submit records and help with conservation. PA is home to an extraordinary diversity of amphibians and reptile species. Many of these species have shown evidence of population decline or life-history traits that make them susceptible to decline. There is a critical need for information on 36 species in PA. Many of these species are sparsely distributed over large areas, making it difficult to accurately survey for their presence and abundance.

While a professional biologist can survey only one location at a time, countless people involved in outdoor recreation across the state regularly come in contact with these native species. The PAHERP database gives the public a chance to help with research and conservation.. The information that is collected will aid in determining the range and status of the species. Data submitted on the 36 species of conservation concern will be organized on the PA Herpetological Atlas website(<http://www.paherpatlas.org/>) and forwarded to the PA Fish & Boat Commission and the PA Natural Heritage Program for entry in their databases. Visit: <http://www.paherps.com> for more information and to start your conservation efforts today. Any conservancy members who plan to take part in the study should notify the conservancy board. If a number plan to help, it may be worthwhile to try to coordinate efforts.



Early Spring Avian Arrivals

by Andrew McGann

Many bird watchers keep their eyes and ears peeled for a suite of species that herald the arrival of spring every year. While the bulk of migratory songbirds arrive at the beginning of May, there are a handful of species that ride the first waves of gentle southerly wind, and give us a preview to the upcoming peak of songbird passage. Somerset County is lucky enough to have a small but dedicated group of bird watchers who enter their sightings in the eBird system (www.ebird.org). This “citizen science” database offers a rich trove of bird observation information, which anyone can use to learn about the birdlife around us. Presented here in chronological order is a select list of early spring migrant species, the dates of the first observations in Somerset County this year, and the observers who reported the sighting:

Eastern Towhee - February 14 - Mary Lou Bowser

Fox Sparrow - March 13 - Linda Greble

American Woodcock - March 14 - Mike Lanzone

Eastern Phoebe - March 18 - Mike Lanzone

Chipping Sparrow - March 24 - Amanda Hersch

Brown Thrasher - April 1 - Mike Lanzone

Tree Swallow - April 1 - Tom Miller

Barn Swallow - April 4 - Linda Greble

Pine Warbler - April 4 - Andy McGann

**Northern Rough-winged Swallow - April 5 -
Mike Lanzone**

Field Sparrow - April 5 - Mike Lanzone

Broad-winged Hawk - April 7 - Linda Greble

**Ruby-crowned Kinglet - April 9 - Linda
Greble**

Blue-headed Vireo - April 11 - Mike Lanzone

**Blue-gray Gnatcatcher - April 12 - Linda
Greble**

Yellow-throated Warbler - April 13 - Mike Lanzone

Louisiana Waterthrush - April 13 - Mike Lanzone

Chimney Swift - April 14 - Andy McGann

Palm Warbler - April 14 - Linda Greble

Northern Parula - April 18 - Linda Greble



Kantner Iron & Steel Helps SLAC

by Len Lichvar (reprinted from the Somerset Daily American)

Normally there would be little connection between scrap iron metal and a lake in distress. But, difficult situations often require innovative solutions and that is why Kantner Iron and Steel owner John Toth has designed a unique fund raising campaign to help assist the Somerset Lake Action Committee (SLAC) in its goal of raising awareness of the infrastructure needs at Somerset Lake.

It has been widely reported that Somerset Lake, which has existed on the outskirts of Somerset since it was constructed and opened in 1957, has been designated a high hazard dam in regard to needed upgrades for its spillway and breast. This has required a partial draw down of the lake's water level. The cost to make the mandated upgrades is somewhere in the 7 million dollar range and the Pennsylvania Fish and Boat Commission, which owns and manages the lake, does not have the financial resources to fund the repairs. The agency operates at least 7 other lakes in the state in similar need with a total amounting to over 55 million dollars.

SLAC was founded a few months ago as a Committee of the Somerset County Conservancy to try to find solutions to the lake's issues, that if go unattended, could result in the total draining of the lake with its recreational and economic opportunities lost.

Toth is now offering to make a monetary donation for every customer served at his locations both in Kantner, located at the intersection of Routes 30 and 403 in Kantner and his location on Listie Road. He simply states that, "I just wanted to help out a little bit and I think providing some funds for SLAC is a good way to do it."

Jeff Payne, co-chairman of SLAC agrees and strongly supports the gesture. "I am very happy that John has taken a big step toward this effort to save this jewel for Somerset County. We hope to see more businesses become involved with similar efforts now that John has taken a leadership role."

SLAC has already met with sportsmen, business leaders and government and elected officials regarding the needed upgrades for the lake and has built a strong and diverse advocacy group for the lake. SLAC is currently planning for public showcase at the lake on the afternoon of Saturday June 14. The "Lake Fest" event is planned to attract anglers, boaters, bird watchers, hikers and others to come to the lake to take part in and promote the many and varied recreational opportunities that exist there.

The funds raised by Kantner Iron and Steel and from other SLAC efforts may not reach 7 million dollars, but the effort will make a statement that the local residents and those who also come from other locales want the lake to remain as a viable component of the community and economy. Making that case to state elected officials who hold the real key to the purse strings to the funding is essential.

As Toth points out, "Somerset Lake is an icon to the area. We would never be able to construct a similar facility in today's economy, so we cannot afford to lose an asset we already have."

For more information on how to contribute to the cause yourself visit www.somersetconservancy.org.

Somerset County Conservancy

Box 241

Somerset, PA 15501

HELP US SPREAD THE WORD!

Pass this newsletter on to a friend and ask them to join.

Enclosed is: \$ 15 Individual Member

\$ 25 Family Member

\$ 75 Sustaining Member

\$100 Patron, Club, Organization Member

\$750 Lifetime Member

Name: _____

Address: _____

City/State/Zip: _____

E-Mail: _____

Somerset Co. Conservancy

P.O. Box 241

Somerset, PA 15501

SEND ALL SUBMISSIONS

FOR

FUTURE NEWSLETTERS

TO

The above address