

# CREEK VOICE



A PUBLICATION OF THE RICHLAND CREEK WATERSHED ALLIANCE | NASHVILLE, TENNESSEE



## Two step enhancement for Richland Creek bank

By Monette Rebecca

RCWA completed a two-phased riparian restoration project this year in an area along Richland Creek that endured heavy flooding and damage in 2010. Seventy community volunteers came out to help plant large trees March 3rd and understory plants April 14th on the creek bank at Urbandale Bridge.

Becoming a popular spot for songbirds now, the sixty native plants will better stabilize the stream bank, filtrate urban run-off pollution, store water and naturally enhance a recreational resource — Richland Creek. A variety of 16 native species suited for Middle Tennessee riparian environments were chosen to enhance the biological diversity of the watershed. The aesthetically pleasing vegetation not only benefits the water quality, riverbank and habitat but also kindly soothes the urban heat island effect and air quality.

This project was funded through Tennessee Environmental Council and Harpeth River Watershed Association with funds from The Dan & Margaret Maddox Charitable Fund and the Metro Flood Response Fund of The Community Foundation of Middle Tennessee. We would like to thank our funding partners, Metro Government, and the Loyal Brand and Blinker Lite companies for donating other essential provisions (coffee and portalet) for volunteers.

RCWA looks forward to implementing more restoration projects for Richland Creek with help from the community and partners.

| Richland Creek Watershed Alliance<br>Native Species for 2012 Urbandale Restoration Project |   |
|--|---|
| Common Name  | Botanical Name                            |
| Shumard Oak  | <i>Quercus shumardii</i>                  |
| Sweetgum   | <i>Liquidambar styraciflua</i>            |
| Black Willow   | <i>Salix nigra</i>                        |
| American Sycamore  | <i>Plantanus occidentalis L.</i>          |
| Flowering Dogwood  | <i>Cornus florida</i> , Cherokee princess |
| Fringetree   | <i>Chionanthus virginicus</i>             |
| Common Winterberry   | <i>Ilex verticillata</i>                  |
| Inkberry   | <i>Ilex glabra</i>                        |
| Virginia Sweetspire  | <i>Itea Virginica</i> , Henry's Garnet    |
| Ninebark   | <i>Physocarpus opulifolius L.</i>         |
| Buttonbush   | <i>Cephalanths occidentalis</i>           |
| Spicebush  | <i>Lindera benzoin</i>                    |
| Arrowwood  | <i>Viburnum dentatum</i>                  |
| Blue False Indigo  | <i>Baptisia australis</i>                 |
| Little Bluestem  | <i>Schizachyrium scoparium</i>            |
| Switchgrass  | <i>Panicum virgatum</i>                   |

# From the President

By Monette Rebecca

On this the fifth anniversary for Richland Creek Watershed Alliance I asked my fellow directors to share why they are serving the board. These and past board directors do the business of putting Richland Creek on a sustainable course, and have consistently moved the work of RCWA forward. I appreciate their time, intellect and community spirit.

Discussing the difficult task of protecting Richland Creek from further degradation several years back, a council representative once quipped, "the squeaky wheel gets the grease". This has become a statement I repeat from time to time. Grease for the squeak can come in many forms: enforcement of protective rules already on the books, investment in long-term protection and restoration, and reclamation of riparian areas. Protecting an urban stream, or more challenging, restoring and changing behaviors that degrade them, needs to be a concerted community effort. From a watershed perspective, developing study partnerships and implementing projects to improve water quality and habitat is some of the work we do with the community's help.

Building a nonprofit organization was never an aspiration of mine, but the time working for RCWA has been a

satisfying and enlightening endeavor. Many years ago I became aware of the diminishing viability of waterways, and the water crisis that we were creating. I started taking a closer look at our home watershed. Before starting RCWA, I worked as an environmental scientist, and saw first hand how much it costs and long it takes to investigate and remediate or reverse mistakes made over many years. I recognized that water resources are so vulnerable, to so many different activities, that it should be our main focus to protect water quality and habitat. Someone once said to me, who understands this challenge well, "If we save an urban stream, we would really be doing something." The depth of this statement inspires me.

RCWA will begin board recruitment this fall. Please contact us if you have questions about, or interest in serving as a RCWA director ([rcwa@comcast.net](mailto:rcwa@comcast.net)). The Board is planning the 2012 annual gathering for 4 p.m. Sunday afternoon, October 7th. I hope you will join our social, come meet the board members and help us celebrate Richland Creek Watershed Alliance's 5th year.

Thanks for your support. Monette Rebecca

## *Why Richland Creek?* By Joel Covington - Treasurer

---

Charlotte and I live a couple hundred feet from a tributary of Richland Creek that our neighbors call Kingfisher Creek. It flows year-round, draining the West End/Whitland Avenue area from Elmington Park through our neighborhood, across the Montgomery Bell Academy grounds and under West End on to the Dominican Campus, where it's known as Bosley Springs, joining Richland Creek directly behind St Thomas Hospital.

There are two branches that feed our creek. Below Elmington Park, several hundred yards of one branch have been channeled underground before emerging to run down the backyards between Carden and Leonard Avenues. Another branch has been so completely buried that it's impossible to tell where it rises and flows but it cheerfully pops up alongside Rolland Avenue to contribute its share to the creek. A seasonal streambed drains the Whitworth development.

From the footbridge that connects Carden to Rolland, you can observe several different species of fish, crayfish, frogs, snakes and occasional turtles. All kinds of birds depend on the creek for drinking and bathing water. Neighbors report coyote viewings and I've been lucky enough to spot red foxes a couple of times.

Native Americans camped alongside our creek and one of them set up a flint-knapping site where I grow tomatoes. Arrowheads and skinning blades and flint scraps that are leftover from his work turn up in the garden from time to time. When a home close to the creek added on, two of their graves were discovered and relocated with appropriate ceremony before construction resumed. They would have appreciated the creek for the clean, safe water it provided.

Our branch of Richland Creek has a sanitary sewer running beneath its streambed and branches have been buried and channeled. It is required to absorb run-off from our busy streets and driveways and to carry the herbicides, pesticides and fertilizers that are washed off our lawns and gardens. Despite it all, it remains a much-loved feature of the neighborhood one that is well-worth serious effort to ameliorate the damage and improve the habitat and water quality.

It deserves knowledgeable and dedicated attention to conservation practices that will make it better and safer and less prone to filling our basements with water when the rains are heavy.

## *Everyone benefits from a clean Richland Creek* By Catherine Hayden - Secretary

My name is Catherine Hayden. I have lived in Sylvan Park for almost eighteen years. My husband has lived here for twenty years. We have seen a lot change in that time--some of it good, some not. One of the good things is the Richland Creek Watershed Alliance (RCWA). I have participated in numerous RCWA creek clean ups but before RCWA there was no organization advocating in an ongoing way for the creek.

When I joined RCWA and agreed to serve on the board, it was for entirely selfish reasons. I do not want conditions on Richland Creek to become any worse; I want them to improve. I ride my bike by the creek almost every morning. I love seeing the fish, birds and other wildlife that depend on the creek for survival. If you think about it, our community benefits from their survival too. A healthy and safe Richland Creek is a recreational amenity

to our community that will protect land values and deliver clean water to the Cumberland River.

Now, I see the importance of the creek in building a sense of community. Those of us who live in the watershed are stakeholders in the fate of the creek. We must strive to make everyone who lives in the watershed aware of its importance. Many people have only seen the beautiful part of the creek along the Greenway but there are many areas that are distressed, as anyone who has been to a stream clean up can attest. Do we want to leave the care and nurturing of Richland Creek up to the chance of others? I don't.

I continue my work with RCWA out of a sense of stewardship of the creek and my community. I hope you will feel this too and become a RCWA member.

## *Richland Creek story* By W. Stacy Vereen - Board Member

Several years ago I lived on a creek. I didn't know what creek it was. It was just some creek. I didn't pay much attention to it and as far as I know it didn't pay much attention to me.

Years later I moved a few miles down the road near another creek. A friend told me he thought it was the same creek I had lived on before. Still I did not know what creek it was. Neither did he.

At some point I looked on a map of where this creek came from and where it went. Turns out, it was the same creek that you cross over when you're driving south from Green Hills on Hillsboro Road, near Tyne Boulevard. It was also the same creek that ran smack through Belle Meade, right across the golf course, under Harding Road, behind Kroger and under White Bridge Road. And the same one that skirts the edge of another golf course (McCabe), passes under Charlotte Avenue, I-40 and Briley Parkway and eventually all the way out to the Cumberland River.

I was amazed that the little creek that was once in my backyard had so much culture.

Not long after, I traced the Cumberland River on a map to the Ohio River. I followed the Ohio River to the Mississippi River down through Memphis, Baton Rouge and New Orleans to the Gulf of Mexico. I grew up on 'the Gulf'. And my family still calls the Gulf Coast their home. It's funny to think that little Richland Creek is connected to the Gulf.

This simple realization changed something in me. I realized that all waters are connected and that what you put in a little creek, like Richland Creek, affects larger bodies of water like the Cumberland and the Gulf of Mexico and even the Atlantic Ocean. It seems to me that with all the problems with water quality these days that the simple solution is for everyone to take care of the water around them. Whether it's a creek in your backyard or the river that runs through your town, if we all would just take care of what's around us, we won't pass along these problems to our children.

### *A very special thanks to Conrad Schneider & Messer Construction*



This year began with an unexpected gift from Messer Construction Company to acknowledge RCWA's contribution to the flood recovery work last year. Messer Construction, committed to the company's focus on giving back to the community where its employees work, live and raise families, awarded Messer outreach officer Conrad Schneider a recognition of excellence for engaging his coworkers in community giving. Conrad chose RCWA to receive the \$500 gift associated with his award, and also connected many Messer volunteers with RCWA events.

# Building in the flood zone - the flood forgotten

By Steve Swartz



Two more tanks proposed to be added on project site, similar size to the one there now.

Blue line indicating reach of 2010 Flood.

In May of 2010, I stood in my backyard watching flood waters approach my 1902 vintage Sylvan Park home at the edge of the Richland Creek flood zone. The wisdom of my neighbors on that day was that the home had not flooded in more than 100 years so I should not worry. The water did stop rising short of my back door, but I challenge the optimism expressed in this 100 year thought. How is West Nashville different from the way it was in 1902? How much asphalt and concrete has been poured along the creek and how many structures built in the centuries old flood zone? Each structure erected in the flood zone will displace an equivalent volume of water upstream presenting a hazard to homes built in previously safe locations, like mine. Urbanization of waterways, like Richland Creek, according to the U.S. Department of Homeland Security, increases runoff into the creek at a rate two to six times over what would occur on undeveloped terrain.

Recognizing the dangers of unmanaged development along our waterways, Mayor Dean has appointed a Metro Nashville Storm Water Management Committee (SWMC) for review of variance requests from owner/developers proposing projects not in compliance with the Metro Storm Water Management Manual. But as Nashville has

grown, development pressure has been unrelenting and the SWMC has come under substantial pressure.

Just prior to the May 2010 flood, SWMC approved the construction of a sewage storage tank at 6109 Morrow Road, the location of Metro Water's West Park Pumping Station. Metro Water calls these storage tanks "equalization" tanks. At their May 3, 2012 meeting, the SWMC was presented the preliminary construction plans for two additional tanks at the same location in the flood zone. In terms of flood waters displaced upstream, these tanks could hardly be located in a worse location. The land for development is located at the very edge of the creek invading the 75-foot buffer, which is necessary for the ecological health of Richland Creek. The homes to the east of the storage tank development, along Terry Drive, were flooded in May of 2010 and these homes are on higher ground. There is no doubt that the tanks will displace large volumes of water in flood conditions.

Monette Rebecca, Executive Director of RCWA, spoke in opposition to the new storage tanks but her remarks may not have resonated with the committee, as the SWMC did not deny issuance of the variance. The case will be placed on the agenda of a future SWMC meeting for a final decision.



Mr. Scott Gillihan, who lives on Morrow Road across from the West Park Pumping Station, wrote to RCWA, "...Back during the 2010 flood I got flooded twice; once by Richland Creek and secondly by the Cumberland River. Maybe not as bad as some, but it was bad enough. And I worry that if Metro builds more in the flood [zone] it will only make matters worse when the next flood comes along. The retention tank they have now didn't help us on that dreadful day two years ago."

So why does Metro Water need these tanks? The story begins in 1823 when the City of Nashville began to build the first sewer system. As was the standard of the day, large clay pipes were laid to carry both the rain water runoff and sewage to the Cumberland River and, later, to major tributaries like Richland Creek. While today's sewage system is much improved, it will still mix sewage and storm water in high rain flow conditions. The difference between today and 1823 is that we now have treatment facilities capable of processing the liquids and rendering them safe for discharge into our waterways. When large volumes of storm water are generated during major rain events, however, the treatment plants are inadequate. In the recent past, high volume rain events have resulted in release of raw sewage into our waterways as many as 50 times each year.

In March 2009, as a result of a 2007 Federal Government court action against Metro Nashville's violations of the

Clean Water Act, a consent decree was signed by Metro in which a promise was made to observe the provisions of the act requiring control of raw sewage. The equalization storage tanks are a product of this commitment by Metro Nashville to the Federal Government.

The tanks are intended to be a buffer or shock absorber for the system. When a major rain event causes an overcapacity situation for the wastewater treatment plant, the flow can be diverted into the tanks in lieu of discharging the sewage into Richland Creek. When the rain stops and capacity is available, the storage tank can be emptied into the pipeline to the waste water treatment plant.

Metro Water has a serious problem in managing our sewage and these storage tanks are a viable short-term solution. The general West Nashville sewer system upgrade sufficient to handle the high volume rain event would cost about \$200 million while two additional storage tanks can be installed for around \$20 million.

Is a solution to the sewage problem available that would not pose so significant an increase in flood risk? It appears that the problem would benefit from further study. Does it make sense to install \$30 million (\$10 million for the already installed tank) of temporary storage tanks when

*Continued on page 6.*

the actual upgrade cost is \$200 million? In ten years, will more tanks at a higher cost be required? Is long-term sewage treatment facility investment a better alternative for Nashville's growth, the Creek, and both neighborhood property values and public safety?

In the aerial photo accompanying this article, the existing tank is to the center left and the proposed two new tanks will be located beside the present tank. Richland Creek is visible between Briley Parkway and the storage tank. Flood waters in May 2010 crossed Morrow Road.

The proposed plan has other costs of a more subtle nature. Metro Government should set an example for the community in protecting the environment; building storage tanks on public lands within the flood zone sends the wrong message to private landowners. This message is hard to miss. The aerial photo at the above gives some appreciation for how immense the tanks are. For this project, 22,500 cubic yards of displacement has been calculated. This is equivalent of dropping a concrete block 84 feet on a side into the flood zone. Another wrong message is creating a situation that forces the SWMC to face one public safety issue off against another – raw sewage against flood risk.

While it is a smaller problem by comparison, Metro issued a permit on May 21, 2012, to Nashville Electric Service (NES) for the construction of a 1,000-gallon waste oil storage tank at 911 63rd Avenue North, the next property downstream to the Metro Water parcel where the sewage storage tanks are planned. This tank will be installed in the flood plain too.

This issue can only be resolved by public involvement. Please write to Mayor Dean and Metro Water Services about a long-term sewage process system upgrade so there does not have to be an environmental or public safety trade-off. Contact your Metro Council member to express your concern about the increased flood risk by these storage tanks. Encourage a more proactive and protective

Storm Water Management Committee and a Storm Water Management Manual, which permits construction in the flood zone only for cases of public safety and when no alternative solution is available. West Nashville residents, like Mr. Gillihan, whose homes are adjacent to the flood zone and upstream from the West Park Pumping Station should be concerned. Councilman Buddy Baker could be particularly helpful ([buddy.baker@nashville.gov](mailto:buddy.baker@nashville.gov)) as the pumping station is in the 20th Council District.

Re: SWMC Case Number 201200009  
Basswood – West Park Equalization Basin Project (Metro Water Services)

You can help by making contact to the following:

Mayor Karl Dean  
100 Metro Courthouses  
Nashville, TN 37201  
Phone: (615) 862-6000  
[mayor@nashville.gov](mailto:mayor@nashville.gov)

Roger Lindsay, Development Review Program Manager  
Metro Water Services  
800 2nd Ave South  
PO Box 196300  
Nashville, TN 37219- 6300  
[roger.lindsey@nashville.gov](mailto:roger.lindsey@nashville.gov)

Paula Kee, Stormwater Management Committee  
Coordinator  
Metro Water Services  
800 2nd Avenue South  
Nashville, TN 37210  
Phone: (615) 880-2334  
[paula.kee@nashville.gov](mailto:paula.kee@nashville.gov)

Council Member contact available online,  
[http://www.nashville.gov/council/council\\_roster.asp](http://www.nashville.gov/council/council_roster.asp) or  
inquire at Council Staff Office, (615) 862-6780.

*We are grateful to our partners and supporters, so far this year!*

Tennessee Wildlife Resources Agency  
Mayor's Office and  
Metro Public Works  
Harpeth River Watershed Association  
Tennessee Environmental Council and  
their partners  
Messer Construction Company

David C. Briley of  
Bone McAllister Norton PLLC  
Loyal Brand Company  
Blinker Lite  
175 RCWA Members,  
Donors & Volunteers

# Not so neighborly...

By Monette Rebecca

In February, I traced the course of the ground spring for a tributary flowing from the west that enters Richland Creek just upstream from Charlotte Pike. RCWA cleaned up the lower portion of this creek in April 2011. The spring surfaces on the north slope of Knob Hill, traces a course to the south of Charlotte, crosses beneath White Bridge Road, and then flows down behind the CVS Drug Store and the Las Palmas Mexican Restaurant before joining Richland Creek just upstream from the bridge. Unfortunately, the stream quickly encounters obstacles and challenges after it leaves Knob Hill.

RCWA has named the newly mapped stream Neighborly Branch for the avenue it crosses first. Much must change, however, before it can earn its new name.

Neighborly Branch emerges from the ground as a healthy stream, but soon thereafter, it encounters urban threats to its health including diversion, encapsulation and development of all sorts. Just past the stream's source, an automobile collision repair shop crowds next to the stream. A debris field of tires, car parts, and trash is deposited along the waterway. At the street edge, an aluminum pipe then encapsulates the brook to force the flow underground. A block later, the stream resurfaces but is quickly swept up by more urban debris and pollution. This abuse is Neighborly's fate along its course with little regard for its environment, water quality or natural track.

At another point downhill in its course, a car repair garage has been built over the stream. Nearby, a spring that would naturally feed Neighborly Branch has been forced to flow over pavement by a different building. The vital aquatic organisms and nutrients found at the stream origination points need to flow through the creek habitat and nourish the stream system below. The types of contaminants that commonly can be found flowing from the automotive industrial development along the stream course typically can degrade water quality and harm aquatic life.

Metro Water Services has determined Neighborly is a viable stream according to state protocols. RCWA wants to bring attention to this forgotten stream and help it onto a path of recovery so it can wear its new name with pride, Neighborly Branch.

A RCWA stream clean up for Neighborly is on the horizon.



# ANNOUNCEMENTS

## RCWA 5th Annual Gathering October 7th

*Five years ago the Richland Creek Watershed Alliance organized to protect, improve and enhance Richland Creek. Mark October 7th Sunday afternoon 4 p.m. as a time to celebrate this fifth birthday with us! Details TBA.*

## Court hearing scheduled for September 5th

*RCWA filed a Writ of Certiorari with Davidson County Chancery Court that will be heard 9 a.m. September 5th. We asked the Court to review the decision made by the Board of Zoning Appeals to uphold the issuance of a building permit for used car sales exercised after the time allowed for abandonment of (nonconforming) use had expired. Because the parcel is located adjacent to Richland Creek and a tributary, it is the Alliance's position that continuance of the land-use fosters stream degradation and flood risk. Filed by C. David Briley (Bone McAllister Norton) on behalf of RCWA (pro bono).*

## Research article accepted

*Wiley Online Library, Ecohydrology, accepted the research article, The Interrelationship of Hydrology and Biology in a Tennessee Stream for publication last month. The journal article references the Tennessee Wildlife Resources Agency (TWRA) instream flow study for Richland Creek (2009-2011). Authors: Kimberly Elkin and Susan Lanier, TWRA; and Monette Rebecca, RCWA*

## RCWA BOARD OF DIRECTORS

Monette Rebecca, Catherine Hayden  
Stacy Vereen, Laurie Jumonville, Joel Covington

*The Richland Creek Watershed Alliance mission is to educate, advocate and participate in activities and scientific research that improves, protects and enhances the environmental sustainability of the Richland Creek watershed.*

## JOIN RCWA - TO SHARE & LEARN MORE

Submit your annual membership of \$25 by snail mail or via PayPal from our website at [www.richlandcreekwatershedalliance.org](http://www.richlandcreekwatershedalliance.org)

Help us meet the 500-member target we made

for our 5th anniversary!

Submit questions or concerns to [rcwa@comcast.net](mailto:rcwa@comcast.net).

For more details, photos or to comment, please visit our blog at [rcwa.blogspot.com](http://rcwa.blogspot.com).

**The Richland Creek Watershed Alliance is a tax-exempt, 501c3 non-profit organization (public charity).**

Learn more about our organization  
or make a donation.  
Informed Giving starts at



**Richland Creek Watershed Alliance**

PO Box 92016 Nashville, TN 37209

*A community-supported volunteer organization  
promoting environmental sustainability  
for the Richland Creek Watershed.*

[www.richlandcreekwatershedalliance.org](http://www.richlandcreekwatershedalliance.org)

*Our watershed is rich with stakeholders who share their gifts.*