

# Kiefer Creek Restoration Project



Summer 2012

## Walmart One Step Closer to Moving In Lorin Working to Get Improvements to Development Plan to Protect the Creek

In the headwaters of the Kiefer watershed, you may soon see developers breaking ground for a new Walmart. Just west of the southwest corner of Kiefer Creek Rd. and Manchester Rd, the developer, the Sansone Group, has moved one stage closer to approval. On Thursday, July 12, the Ellisville Planning and Zoning Commission voted to approve their petition for a permit, moving the plan forward for approval by the City Council. The meeting was packed with Ellisville residents who came to speak – most of the speakers were opposed to the project in its current form.

Back in May, Lorin sent a list of nine recommendations that would improve the sustainability of the new development and reduce the negative effect on Kiefer Creek. These recommendations focused on using best management practices (BMPs) to reduce runoff, particularly of chloride, a major pollutant in Kiefer Creek.

Some of the recommendations were to use:

The Commissioners were very amenable to his comments, and later in the meeting they voted that Lorin should be involved moving forward, and that Ada Hood, the Ellisville city planner should speak to him in more detail about his suggestions. After it was pointed out that Sansone has already gone “above and beyond” on some of the environmental requirements for the site, one commissioner responded that Lorin’s suggestions might be another place where they can “go above too.” We have a great opportunity to use our power as a watershed coalition to aid the City of Ellisville, Sansone, and Walmart in making responsible choices for the watershed.

- A brine system in the winter, instead of rock salt, to reduce chloride runoff
- Native plants in their landscaping to increase infiltration of runoff
- A green roof to reduce runoff and increase energy efficiency
- Permeable pavers in sections of the parking lot to reduce runoff from the lot
- Wetlands and infiltration basins instead of detention basins, so stormwater is filtered and stored more effectively

### Want to get involved?

- Sign up for our email list at [www.kiefercreek.weebly.com](http://www.kiefercreek.weebly.com) – we’ll send out updates as this story progresses
- Attend the City Council Meeting on Wednesday, July 18 at 7:00pm

As always, feel free to call our office at (314) 727-0600

## Charrette

*[shuh-ret]* **noun** An intense period of design activity; any collaborative session in which a group of designers drafts a solution to a design problem

border the creek help fix the soil in place, prevent erosion, and filter stormwater as it approaches the creek. During the charrette, several riparian zones were identified and analyzed for restoration.

There are also areas in the park that can flood after a rain event – in the spring, some spots near the parking lots are muddy all season long. Areas like this are begging for a rain garden. Rain gardens are made up of plants, ideally native plants, which absorb the water that otherwise would collect in pools or runoff into the creek. Rain gardens are a great option for landowners of all types to reduce their stormwater runoff and showcase beautiful native plants. As well as reducing runoff, a rain garden in Castlewood would act as an example for others in the watershed.

Of course, this will require a lot more work before we can start planting. A well-researched plan must be written and approved, funding must be secured, and staff and volunteer time needs to be designated to maintain the restoration areas. This charrette was the first step in a project that will take years to complete, but will result in direct improvements to the health of Kiefer Creek.

On Thursday, July 12, professionals from Missouri agencies and non-profits met for a charrette to discuss the potential for restoration projects in Castlewood State Park.

Castlewood State Park has large areas of forest that support wildlife and help keep the creek healthy. But there's always room for improvement. A few sections of Kiefer Creek in the park have little to no buffer in the riparian zone. The plants that



## Map of the Month



This map shows the wetland areas and alluvium for the water bodies pictured: Kiefer Creek and the Meramec River. On the grayscale form of this map, you can generally see the alluvium and wetlands as the lighter gray areas that surround the creek and the river. Wetlands are crucial to maintaining a healthy water body and watershed, as the wetlands keep water levels more stable and filter pollution in the water.



# Our Upcoming Events

## Hike in Castlewood State Park

*Saturday, August 11, 10 am*

*Saturday, September 8, 10 am*

*Saturday, October 13, 10 am*

Want to learn more about Kiefer? Join us on the second Saturday of every month in Castlewood State Park. We hike for about an hour and a half, then sit together for snacks and conversation. See the beauty of Kiefer Creek, the watershed, and the Meramec firsthand, learn about the local plants and wildlife, and meet other people interested in the watershed. Bring your friends, your kids, and your dogs!



## Watershed Planning Meeting

*Tuesday, October 9, 6:30 pm*

*Saturday, October 13, 12 pm*

We hold watershed planning meetings every three months or more. These meetings are an essential part of the project, where watershed residents, visitors to the creek, and our partnering organizations come together to learn about the creek and our work. They are important as a way to make sure everyone's perspectives are taken into account as we make decisions about restoring and preserving Kiefer Creek. If you are interested in the future of Kiefer Creek, come to the meeting to learn more and have your voice heard!

## Save the Date

Watershed meetings will be held on the following dates in the coming year:

- Tuesday, October 9, 6:30pm and Saturday, October 13, 12:00pm
- Tuesday, January 8, 6:30pm and Saturday, January 12, 12:00pm

To keep up to date with the events calendar, **sign up for our email list at [www.kiefercreek.weebly.com/survey.html](http://www.kiefercreek.weebly.com/survey.html)**. You can also sign up to volunteer and tell us about how you came to be interested in Kiefer Creek.

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**Call: (314) 727-0600**

Scan this QR code with your smartphone's QR reader to bring you to the sign up page.



## Intern Spotlight:

### Spencer Litzau

This summer we have had the pleasure of having an intern to work on the collection of field data and watershed science research for the Kiefer Creek Project. Spencer Litzau is a civil engineering student from Saint Louis University. His first project was to mark points of interest in the watershed such as pools, flows, springs, erosion areas, the high water line, and wetlands, using a G.P.S. unit. This data will inform our watershed restoration planning effort and has helped us build a better understanding of the hydrologic characteristics of Kiefer Creek.

Spencer has applied his engineering skills to research the 'flow duration curve' mathematics used when modeling pollution loads in a watershed. Flow duration curves provide a detailed account of the flow of the stream, allowing for more informed decisions about the pollution load capacity of the water. This method is used to give base goals for pollution levels and to develop a TMDL (Total Maximum Daily Load), a measurement of the maximum amount of a pollutant allowed in a water body. Because Kiefer Creek is listed as impaired for bacteria and chloride, the Department of Natural Resources is developing a TMDL for the creek.

He has also been looking into other watershed projects to find examples that improved water quality in situations similar to the Kiefer watershed. Spencer attended the East West Gateway Council Water Resources Council meeting with Lorin – where he learned about the other restoration projects in the area and the best management practices that were most successful. He is currently researching constructed wetland waste treatment systems, which could be beneficial to Kiefer Creek for reducing bacteria loads from septic systems.

We're so happy to have Spencer on our team for the summer! His work is invaluable part of the watershed planning process – helping us understand the creek through data and GIS analysis.



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