



at a  
glance

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PIEDMONT TRIAD  
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# STORMWATER steward

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## FORMAL VS NONFORMAL EDUCATION

If you were to open up the Merriam-Webster dictionary, flip through the pages until you found the word "education", you might see something like this:

ed·u·ca·tion: (noun)

- 1) The process of receiving or giving systematic instruction, especially at a school or university.
- 2) An enlightening experience.

© Merriam-Webster

As we all know though, education can go far beyond its textbook definition. Education itself can be split into 2 categories, formal and non-formal.

### Formal Education

When you think back to the days you went to school, that was formal education in its prime. Put simply, formal education has a specific structure that needs to be followed. There are rules, guidelines, and requirements that need to be met. Those requirements entail concise educational standards (depending on the grade) and curriculum guidelines. Those that teach formal education are also trained professionals. They typically specialize in a specific field of study or even an age range. Also, the lessons are

more traditional and classroom based. There's typically a well-defined calendar schedule for formal educators to follow. Those who teach formal education usually get into a rhythm since they interact with the same students throughout the school year. By teaching the same audiences day by day, they have the ability to facilitate programs that can span for more than one day. They can utilize this to really drive a new concept for their students to understand it to the best of their ability. Now, even with guidelines, that's not to say formal educators can't get creative with their lesson plans. If it adheres to the essential standards and relates to the lesson plans, formal educators can incorporate fun and interactive programs with their students. Sometimes, though, formal educators try to expose their students to new opportunities and experiences.

### Nonformal Education

Field trips, after-school programs, visitors to schools; these are all examples of nonformal education. The major difference between formal and nonformal education is that nonformal educators do not need to follow strict guidelines. They tend to have more freedom in devel-

oping and implementing lesson plans for students of all ages. With more freedom, nonformal educators can craft programs that go outside the scope of a traditional classroom setting. Taking students into a different environment, such as outside, can stimulate their learning experience. Providing them with the opportunity to step outside of their comfort zone, or possibly into it, is one of the main objectives of non-formal education. Every student is different, not just in their personality, but in their learning styles as well. Non-formal education works to appease the different learning styles and needs of various audience types. While this type of education does not need to follow strict guidelines, it is still organized in some fashion. Although Stormwater SMART itself is a nonformal educational program, its' facilitators work with local teachers to provide programs that relate to the mission of the program as well as the current essential standard being covered in the classroom. When paired together, formal and nonformal education are very powerful tools.

Source: <http://enhancinged.wgbh.org/started/what/formal.html>

## CREEK WEEK RECAP

It used to be a common activity to go out “creek stomping” or playing out in local creeks and streams. In the present time, that appreciation for our local waterways is not as prevalent as it once was. To tackle this, many counties, including Forsyth holds an annual spring event titled Creek Week. The purpose of Creek Week is to encourage locals to learn about and experience their urban streams like they used to many years ago. Water is a vital resource for humans and all living things alike, so it is pertinent to maintain a connection and understanding with our local waterways.

Creek Week is packed with various events, clean ups, and activities for local community members to get involved with. To stay engaged with their audience, Forsyth County constantly updated their Facebook page specifically dedicated to the event. They even held a photo contest that encouraged participants to upload their very own “selfie” taken at one of the county’s stormwater solutions self guided tour sites. The

first ten people to upload their selfie received a Forsyth Creek Week t-shirt as well as a rain gauge!

To get an idea of how Creek Week went, let’s take a look at all of the events held on April 1st. The day kicked off with two cleanups, the Great American Cleanup as well as community cleanups held throughout the county. All of these cleanups started at 9am, and went on until around noon. If a cleanup wasn’t for you, then you had the option to attend their Planting Party at the Park, starting at 10am. This “party” took place at the Fourth of July Park in Kernersville, and had participants helping install native plants. The purpose of these plants is to improve water quality by stabilizing the soil and acting as a buffer for stormwater runoff. These native plants also provide a great habitat for wildlife and pollinators. Once you were done either cleaning or planting, you could head over to the Lewisville Library at 2pm for an interactive educational program

with the Enviroscope. Now, that was just one day’s worth of events. Imagine all the fun you would have attending the entire week!

Forsyth Creek Week is sponsored every year by various organizations, listed here: <http://forsythcreekweek.squarespace.com/sponsors/> to get a comprehensive list and read some background information! This year marks the 5th annual Creek Week for Forsyth County. If you didn’t make it this year, be sure to get involved next year. Creek Week usually happens during mid-late March, so keep an eye out for the 2018 dates.



Photo by Forsyth Creek Week Facebook page, [https://www.facebook.com/pg/CreekWeek/photos/?ref=page\\_internal](https://www.facebook.com/pg/CreekWeek/photos/?ref=page_internal)

## HIGHLIGHT INTERVIEW: KEEP DURHAM BEAUTIFUL - CREEK WEEK

**Q:** Who are you, and what do you do?

**A:** My name is Monica Ospina and I am a Conservation Trust for North Carolina AmeriCorps member serving with Keep Durham Beautiful. My role at Keep Durham Beautiful is to coordinate volunteers and provide environmental outreach and education to Durham residents.

**Q:** What is Keep Durham Beautiful all about?

**A:** Keep Durham Beautiful is a non-profit and affiliate of Keep America Beautiful. Our mission is to engage and inspire individuals to take greater responsibility for their local environment. We work with multiple community partners and volunteers to prevent litter, reduce waste and increase recycling, and to beautify spaces through community greening.

**Q:** What was the main goal for Creek Week in Durham?

**A:** Creek Week is a weeklong of events hosted by multiple community partners. The main goal of Creek Week is to appreciate and discover local streams by providing educational events, cleanup events, recreational events, and arts and crafts events.

**Q:** Did you see any impact on those that participated?

**A:** I didn’t participate in the events directly; instead I participated in the planning of Creek Week. I can say that there were multiple community partners that helped organize and make Creek Week a success. Given that this was the 9<sup>th</sup> annual Creek Week and that Raleigh would like to emulate Creek Week for their city, this speaks to the success and impact of Creek Week.

**Thank you, Monica!**

## Water Quality Workshops

Davidson County Cooperative Extension has offered various water quality workshops to its local residents, which have been coordinated by its' Horticulture Agent, Kira Chaloupka.

On November 3, 2016 they offered an Intro to Rain Barrels workshop. Environmental programs coordinator of Stormwater SMART, Lindsey Lengyel, lead this workshop for a very engaged audience. Those that attended learned about what rain barrels are, what purpose they serve, how they're built, as well as additional means of harvesting rain water. Many participants left expressing their interest in a rain barrel construction workshop, and this did not go unnoticed.

On April 11th, they held a Rain Barrel Construction workshop for a total of 26 participants. For a minimal fee, attendees were provided with supplies to assemble and take home their very own rain barrel. The workshop began with an informative lecture review about rain barrels, and ended with the "DIY" section for everyone to construct their rain barrel. The takeaways from this workshop were outstanding. "100% of participants said they will use the rain barrel they made; 48% will build additional rain barrels, and 92% of the participants increased knowledge on the process of building a rain barrel and alternative rain harvesting systems."



Photo and stats by Kira Chaloupka

## MEMBER SPOTLIGHT: DAVIDSON COUNTY

As of 2013, the census for this county was estimated to be 163,420 residents. Davidson County residents are located within one of two watersheds: High Rock Lake, or Lake Thom-A-Lex. Residents of this county are also members of the Yadkin Pee Dee river basin, which happens to be the 2nd largest river basin of North Carolina!

The primary source of drinking water for Davidson County comes from either the Yadkin River or Lake Thom-A-Lex. A 2015 report conducted by the Source Water Assessment Program (SWAP) revealed that Lake Thom-A-Lex has a higher susceptibility rating to potential contaminant sources (PCS) than other drinking water sources in North Carolina. For example, it was given a higher susceptibility rating than City Lake, the source of drinking water for the city of High Point, which received a moderate susceptibility rating. A higher susceptibility rating does not necessarily mean the water quality is poor, but rather that the potential for the water to be introduced to potential pollutants is more prevalent. Read more about it here:

<http://www.lexingtonnc.net/modules/showdocument.aspx?documentid=1242>

There are some threats to the water quality within the watersheds of this county. One of the most major threats is sedimentation. Sediment can travel with stormwater runoff from recently clear-cut mountains, new properties cleared for residential development, or even newly exposed sediment from construction sites. When it was first built, Lake Thom-A-Lex initially contained

2.2 billion gallons of water. However, since being built, about less than 10% of its volume has been taken over by silt, a result from a surplus of sediment entering the lake.

However, best management practices, or commonly referred to as BMP's, are implemented to reduce the amount of polluted runoff from entering local water bodies. BMP's can vary in size, function, and aesthetics. The county has implemented a Watershed Ordinance with the intent to limit the amount of impervious surfaces throughout the watershed. Examples of impervious surfaces include buildings, local roads and highways, sidewalks, driveways, or any other surface that does not allow water to infiltrate. By limiting the amount of impervious surfaces, the county will reduce the amount of stormwater runoff that is produced. Providing more pervious surfaces, or areas that allow water to infiltrate, will help decrease or slow down stormwater runoff. Non-residential areas are able to develop up to 24% of impervious surfaces while areas with a higher density are able to develop up to 70%.



Photo of Lake Thom-A-Lex by PMLynchPhoto, <https://hiveminer.com/User/PMLynchPhoto>

## THIS SEASON'S FOCUS: FERTILIZER

Davidson County  
Randolph County  
Rockingham County  
Archdale  
Asheboro  
Burlington  
Elon  
Gibsonville  
Graham  
Green Level  
Haw River  
Lexington  
Mebane  
Oak Ridge  
Summerfield  
Randleman  
Reidsville  
Thomasville  
Trinity

You know what they always say, "April showers bring May flowers!" Everyone is gearing up to get their gardens and lawns back up and running. Here are some things to consider during this upcoming season. While we understand fertilizer is used to promote plant growth in your gardens, there are other alternatives that you can explore! One suggestion we have is to save your lawn clippings and re-mulch them. Repurposing your lawn clippings as fertilizer is not only cheap and simple, but better for the environment. A major concern with fertilizer in regards to water quality is the potential for those extra nutrients, such as nitrates and phosphates, to enter local water bodies. Nitrates and phosphates not only promote plant growth, but an excess amount can also promote the growth of algae. Also called an algal bloom, these can occur when a water body is experiencing eutrophication, or an excess amount of nutrients entering a system. Algal blooms

decrease the amount of productivity occurring in a system by blocking the sunlight from penetrating the water, thus affecting any aquatic plants that might be living in the water. In addition to having an impact on the plants, algal blooms lead to a depletion in dissolved oxygen which affects various types of aquatic life.

Also, be sure to make note of your soil type/pH before you go out to purchase any fertilizer. The type of soil you have will impact the type of fertilizer that will be best suited for your planting needs. Free soil testing is provided through your local cooperative extension, so reach out to them to utilize your local resources!

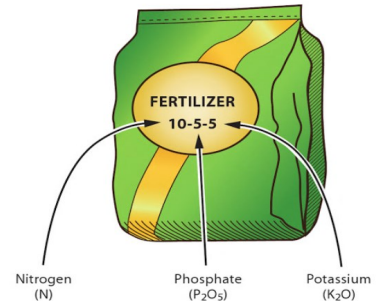


Photo by [Kathy Ikeda](#)

## LOOK FOR STORMWATER SMART AT AN EVENT NEAR YOU

**April 22 - Earth Day at the Zoo, Mebane Dogwood Fest**

**May 6 - Lexington Multicultural Festival**

**May 13 - Summerfield Founders' Day, Dan River Cleanup**

**May 18 - Town of Elon Stormwater Public Meeting**

**June 3 - Oak Ridge RidgeFest**

**June 10 - Deep River Cleanup**

**June 17 - Summerfield Fishing Derby**

**June 18 - Randleman DIY Rain Barrel Workshop**

**June 22 - Graham Camp**

**June 28 - Burlington Nature Adventure Camp**

**July 10-14 - Rockingham County Library Week**

**July 12 - Burlington Beginner Fishing Camp**

**July 18 - Davidson County SWCD Summer Camp**

**July 31 - August 3 - STEM X Camp**

Stormwater SMART was created by the Piedmont Triad Regional Council (formerly Piedmont Triad Council of Governments) to help Phase II communities comply with National Pollution Discharge Elimination System (NPDES) and Jordan Lake Public Education and Outreach requirements. Stormwater SMART is supported through dues paid by member governments.



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