



Raining Beauty

As the summer sun heats up and our lawns dry out, many people will start watering their lawns to help their beautiful landscape survive the scorching heat.

The average lawn consumes 10,000 gallons of water a year with up to 70 percent of that water being wasted during the summer months due to over watering, inefficient operating irrigation systems, and runoff. So, how can a homeowner combine beautiful landscape and water conservation? With a Rain Garden!

What is a rain garden? A rain garden is a shallow depression that is planted with deep rooted native plants and grasses. A rain garden is not a water garden, wetland, or pond. It is designed to absorb, filter, and reduce the flow of stormwater runoff from the property.

There are several benefits to rain gardens. By using native plants in the garden, it restores the habitat of birds and beneficial insects that reduce the amount of pests and harmful insects from the garden area. Deep rooted native plants stabilize the soil reducing erosion of sediments into the storm drain system. The roots will help to break up hard soils to allow water and nutrients to infiltrate deeper into the soil.

Since rain gardens are located in a shallow depression, they retain stormwater allowing the garden to filter some pollutants from the runoff as well as minimizing local flooding. The Environmental Protection Agency (EPA) estimates that the pollutants carried by stormwater account for up to 70 percent of all water pollution.

Compared to a conventional lawn, a rain garden is effective in removing up to 90 percent of the nutrients and chemicals found in stormwater runoff and up to 80 percent of the sediment in runoff. Not only does the garden reduce pollution but it also absorbs up to 30 percent more water. This fact alone, not only increases the root depth of the native plants, but it will also increase the root depth of lawn around the rain garden.

There are some basic guidelines to installing a rain garden. The ideal location for a rain garden is for the garden to be positioned near a runoff source like a down spout, driveway or a sump pump. If these locations are not options, during the next rain, watch the drainage patterns of the yard. Where the water collects as it is draining would be a good location for a rain garden. Make sure that the garden is at least 10 feet from any building, that it is not on top of any utilities, and that it is not near a septic drain field.

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My Connection With the Trinity River: The David Demarest Story

David Demarest, is the Trinity Strand Trail Chairman of the Board. In 2002, a group of dedicated individuals formed the Friends of the Trinity Strand Trail to spearhead the planning, construction and enhancement of a 7.8 mile non-motorized bike and bike trail along the original Trinity River watercourse, adjacent to downtown Dallas. The Trinity Strand Trail will improve air quality, provide recreational opportunities and promote ecotourism for our citizens and visitors to the city. Connecting area hotels, DART, medical facilities, businesses, and residential dwellings, the trail will attract new development to the Riverfront neighborhood. The Strand will extend the city's trail system and enhance the range and benefits of the Katy Trail and Trinity River Project recreational facilities.



David Demarest

What is your connection to the Trinity River? I am a native Texan and grew up in Fort Worth, Texas, with the Clear Fork of the Trinity River. I spent a lot of time in Trinity Park as a young child and heard stories of the great flood of 1949. My father told me stories of standing on the roof of his business, as the water was rising. Many a summer day was spent on Benbrook Lake (West Fork of the Trinity River) and in the fall, sliding down the grassy earthen dam on cardboard boxes. I learned to water ski on Eagle Mountain Lake and would spend any available time skiing on Lake Worth or Benbrook Lake. So, my childhood affinities were more for Clear Fork and West Fork derivatives of the River, and I eventually landed in Dallas with a new career in architecture. Lake Grapevine and Lake Lewisville became my adopted lakes along the Trinity system. Later in life, I moved my residence to the escarpment along the Katy Trail near Goat Hill. Looking out from my windows perched above this

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Now that ideal area has been identified, here are the general guidelines to installing the rain garden.

- Measure the drainage area to the proposed garden site. The garden size should be at least 20 percent of the drainage area.
- In a flat area, the bed depth should be between 12 to 18 inches with a level but not compacted bottom. If there is a slope, the depth should increase as the slope increased.
- The bed should have good soil that absorbs water quickly.
- Use native plants. These plants are tolerant of the Texas heat and drought conditions.
- After the planting, add approximately 3 inches of mulch to the top of the garden to aid in water retention.

A rain garden is an approach to rainwater harvesting that can prevent flooding and erosion and turn stormwater problems into water supply assets by slowing run-off and allowing it to soak into the ground. Rain gardens are not ponds. They are usually planted with native vegetation that is hardy and attractive. Plants in a rain garden can give color to the landscape at all times of the year.

To learn more about rain gardens, visit <http://rainwaterharvesting.tamu.edu/raingardens/>.

Tips & Drops

Upcoming Events

June

- 20** City of Dallas Stormwater Rules & Regs: Industrial Workshop
www.wheredoesitgo.com
- 21** Trinity Bird Count Celebration Finale
www.trinitybirdcount.com
- 23** Urban Dash 5K
www.fairpark.org

Trinity Bird Count
www.trinitybirdcount.com
- 24-29** Annual EPA Region 6 Stormwater Conference
<http://www.epa.gov/region6/water/npdes/sw/ms4/conference.htm>

July

- 1** Deadline to enter North Texas Low Impact Design Competition
<http://www.northtexasgreencouncil.org/index.php/news/chapter-news/243-site-landscape/879-north-texas-low-impact-design-competition>

escarpment; I have a 270 degree view of which a good portion is to the West and across the Trinity floodplain. It is easy to imagine the struggles early Dallas had with the River as the topography gradually builds itself away from the basin. I am involved with the Trinity Stand Trail which is building a trail along the Old Meanders riverbed. This artifact of the Trinity River has been reclaimed from public works, where it still provides stormwater management, but is now being revitalized as a recreation area for the emerging Design District. Our plans have this trail connecting to the Katy Trail, as well as the levee system trail, and on West Dallas via the Continental Bridge. As a Scoutmaster for Troop 718, we do backpack training within the levees at Trammell Crow Park, where there is a 6 mile loop already in place. We also have a rescue dog, a Schipperke that befriended my wife Linda as she was letting the other doggies have some fun within the levees.

What do you think of when you hear someone say, "The Trinity River"?

I think of the vast watershed which makes up the Trinity River and the many branches that eventually become one river as it flows into the Gulf of Mexico. The management of the River became an engineering solution that created real estate opportunities along the reclaimed floodway and allowed for a new interstate artery to develop. Dallas corridor became a City protected by a levee system that most folks in Dallas are unaware of. The challenge today is to reunite Dallas with their River and create recreational opportunities within the corridor.

How have you seen the Trinity River and Old Meanders change during your time on it?

I've seen a change in attitude about the River, and reclaiming a portion of the Meanders for the Trinity Strand Trail is contributing to the grass-roots awareness of the history of the Trinity in Dallas. We hope to get the message out about the significant history the river has played in development of Dallas and now with the Trinity River Corridor Projects coming on line, the momentum is growing.

It looks like you have spent a lot of time around the Trinity River, what have you learned about the river?

The Old Meanders is technically a stormwater sump with the stormwater volume pumped into the river through the Baker Pump Station. I have learned that the management of the stormwater is critical to the health and safety of the Dallas residents and that we can partner with the engineering challenges to bring the river back to life by reclaiming and restoring the Meanders as both a recreational destination as well as an essential piece of the stormwater management of the Trinity

River. I have learned about the migrating bird species that occupy the Trinity Corridor and Meanders and why a healthy river is paramount to the ecology of our area.

How do you think the Trinity Strand has changes people's ideas of the Trinity River and Old Meanders?

Foremost, I feel the Trinity Strand Trail has reunited Dallas with a part of its past. Eighty plus years ago the Trinity River was relocated behind a series of levees that, for the most part, hid its existence from the citizens of Dallas. The Trinity Strand Trail is reclaiming an artifact of the Old Meanders and this reclamation as a park--complete with hike and bike trails and a future restoration project--will forever remind Dallas of the natural location of the river prior to its relocation a half a mile to the West. The eye-beam structure at our Turtle Creek Plaza gives a visual reference to the scale of the 1908 flood as it marks the height of the water during the flood. With this reference, it is easy to imagine the scale the River can swell during a 100 year event.

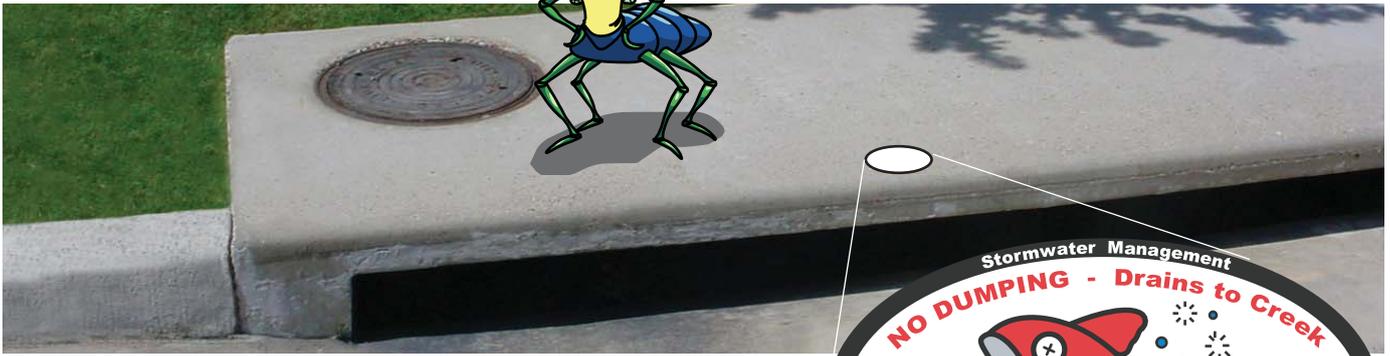
What do you want people to know about the Trinity River?

Boundless potential! Opportunities associated with the Trinity River span the gambit from entrepreneurial to recreational. It is a work in progress, one that started 80 plus years ago with George Kessler's master plan to the Trinity River Corridor Project. There is so much inertia behind all of the works that have already taken place including those that are just now being implemented, and that is just Dallas. People should be aware that the Trinity River is really 5 different branches, the West Fork, the Clear Fork, the North Wedge, the Elm Fork, and the East Fork which merge to become the Trinity River. The "Trinity River" most people in Dallas are familiar with is the Elm Fork which is joined with the West Fork near downtown. Dallas' history is tied to the Trinity River with the "white rock crossing" of the Trinity River, the location of the easiest passage for wagons to cross the river before other modes were established.

This is a continuation in a series of articles that features local Dallasites and their connection to the Trinity River. If you or someone you know wants to be considered as an interview subject in this series, contact us at 214.948.4022 or email stormwater@dallascityhall.com.



ASK ME, TRINITY TRUDY



Q: I would like to help bring awareness to stormwater pollution prevention in my neighborhood, but the only thing I have planned is a neighborhood cleanup. Is there anything else I could do to help educate my neighborhood?

A: The Stormwater Management Outreach Team has many educational opportunities for neighborhoods. As you prepare for your neighborhood cleanup, Stormwater Management is available to meet with your neighbors and educate them on the stormwater benefits of their cleanup efforts. We are also available to make presentations at your neighborhood meetings.

Another awesome stormwater educational opportunity that we offer is our Storm Drain Marking Program. It is a program where volunteers can mark the storm drain inlets in their neighborhoods with a placard that says “**No Dumping-Drains to Creek**”. The colorful placards serve as a friendly reminder that storm drains inlets flow directly to our local lakes, rivers, and creeks. This volunteer program gives neighbors an opportunity to share in the Storm Drain Marking experience and educate those visiting your neighborhood.

The Storm Drain Marking Volunteer Program is FUN and EASY. To learn more, contact the Stormwater Management Outreach Team at stormwater@dallascityhall.com.

If you have a stormwater question for Trinity Trudy, email her at stormwater@dallascityhall.com. Look for her responses in future issues of “Inside the Inlet.”

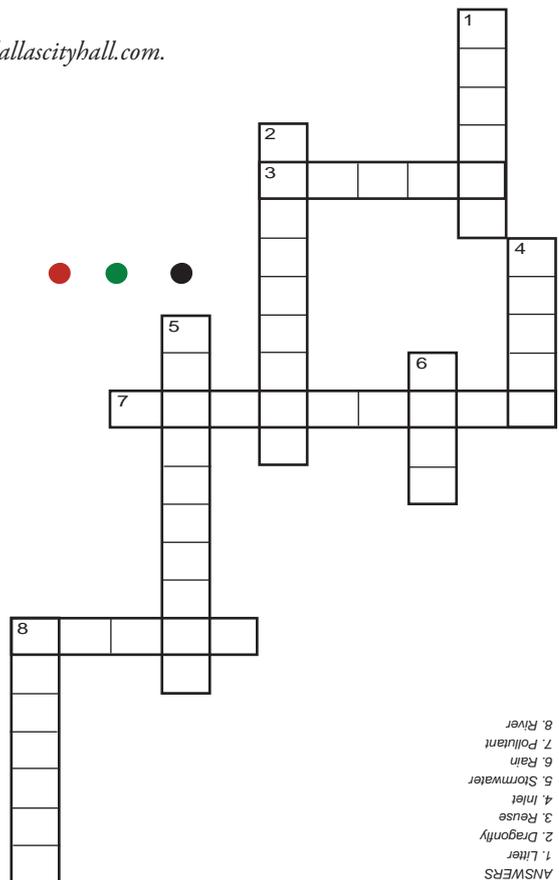
JUST FOR KIDS BIG and small

DOWN

1. Trash on the ground
2. Trinity Trudy is a . . .
4. Stormwater flows into an . . .
5. Rain water is . . .
6. Water that falls from the sky
8. To put or pass through a cycle again

ACROSS

3. To use again
7. Something that pollutes
8. The Trinity . . .



- ANSWERS
1. Litter
 2. Dragonfly
 3. Reuse
 4. Inlet
 5. Stormwater
 6. Rain
 7. Pollutant
 8. River



Saving From a Rainy Day

With all of the recent rainfall, many people think the water conservation efforts should end because the reservoirs are full. Although it is good that we are getting so much needed rain now, we know that the rain will not last. The fact is that many communities were already experiencing drought like conditions and under water restrictions before the rainy season.

Outdoor water usage can be more than 50 percent of our total summer water use. By controlling this use, we can minimize its impact on our current infrastructure and future expansion.

With a few simple steps, you can have a beautiful lawn, save money, and conserve water.

FYI Readers

Stormwater Management is here to serve and meet the needs of our valued readers. For additional information regarding the following:

- General stormwater information
- Construction and Industrial workshops
- Presentations about stormwater pollution prevention or permitting requirements

Contact us at . . .

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- Take the time to make sure that the water being used **for** the lawn is actually being used **on** the lawn. When using a sprinkler system, make sure that the sprinkler heads are positioned correctly to water the lawn, not the sidewalk. This also holds true for the sprinklers that attach to water hoses.

- Many times we overwater our lawns. Either we are using too much water or we are watering too often. Overwatered lawns are a big issue in our city. Many people think that they have to water their lawn everyday to have a nice lawn. That is simply not true. Watering the lawn one to two times a week actually helps the grass to grow a deeper root system allowing the grass to grow healthier.

- Be sure not to water your lawn between 10:00 a.m. and 6:00 p.m. This is the hottest time of the day. Watering during these hours will cause the water droplets to act as a magnifying lens on the blades of grass causing them to burn. The other reason not to water in the heat of the day is to comply with the City of Dallas' Water Restrictions. For more information, visit <http://savedallaswater.com/ordinance/>.

While in the rainy season, a rain barrel is an excellent idea for catching water and using it to water your garden. The rain barrel collects rainwater in a sealed container and stores it until the water is needed. Think of it as your own personal water tower. The rain barrel is attached to the rain gutters of your house to catch the rains that flows off your roof. Near the bottom of the barrel, there is a spout to connect to a water hose or fill a water pitcher. To learn how to make your own rain barrel, visit <http://dallas.tamu.edu/media/31332/Making%20a%20Rain%20Barrel.pdf>.

The NEW permanent watering schedule is a proactive water conservation measure, as opposed to a response to drought conditions. This addition to the existing conservation ordinance will help extend our water supply and possibly delay the need for more restrictive watering measures when the next drought comes.



FACT:

Yard waste washed down our storm drainage system is a form of pollution and accounts for a fifth of all garbage generated in the U.S. each year.

Yard waste decomposes in local creeks, lakes and the Trinity River causing algae to grow.

Too much algae lowers the amount of oxygen in the water which may suffocate aquatic and plant life.

Did you know sweeping or blowing waste into the street and storm drainage system could cost you up to \$2000?

TIPS:

Sweep or blow grass clippings from your sidewalk, driveway, and street back onto your yard. Yard clippings act as a natural fertilizer.

Fallen leaves should be raked or blown from your yard, sidewalk, driveway, and street, collected then bagged and placed for collection during your bulk waste collection week.

Compost your grass clippings and leaves; they can serve as a natural fertilizer.