



Spring 2009

The Water Spout



The WaterSpout

“Making the Connection”

Green, sustainable, eco...these words fill our eyes and ears today. Morning news anchors share ideas for converting our daily practices and our children return home full of conviction for saving the world. We know that our actions affect the natural resources we enjoy and love along the coast, but how?

Starting with this issue **The WaterSpout** will be adding a regular column titled “Making the Connection.” Together we’ll explore the impacts specific actions in our daily lives have upon natural resources here in the Coastal Empire, as well as provide links to published studies and resources available for Coastal Georgia.

Check out this issue as we touch on how impacts from our built environment affect water quality. Learn specific studies detailing how certain choices for how we live and build can impact our waterways. Learn how certain building practices can alleviate or ease these impacts. Then find links to available resources to help you learn more.

If you have any questions, suggestions for topics to cover, or resources you would like to share with others please contact us.

Calendar of Events



April

Dump the Pump	3
GUFC Tree Fundamentals Workshop	8
Chatham County Resource Protection Commission Technical Advisory Committee Meeting	16
Earth Day Festival Forsyth Park	18
USGBC Savannah Green Product Expo	28
LEED NC 2.2 Training Exam	28
Chatham Environmental Forum	20

May

Forsyth Produce Market (Opening)	9
Chatham County Resource Protection Commission Meeting	21
Chatham Environmental Forum	25

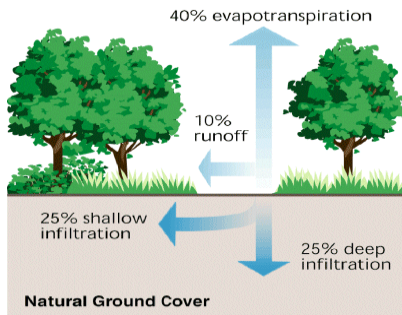
June

Chatham County Resource Protection Commission Technical Advisory Committee Meeting	18
Chatham Environmental Forum	22

Ongoing: Trustee’s Market every Wednesday & Saturday.

For more information on any event listed or if you would like to share an event contact the MPC Natural Resources Section.

Making the Connection to Our Built Environment



Coastal systems in Georgia are impacted directly and indirectly by many development activities. Often these impacts are not fully understood even by scientists. Studies are continually being conducted by a number of universities, organizations and government entities along the coast. Keeping up isn't always easy and addressing the many complexities and connections in this small column is not always a reality. However, the journey can start here.

Choices in land use can have dramatic impacts on the natural environment. One major impact relates to non-point source pollution in our waterways. Nature has a succinct method for handling rainfall: absorption and evapotranspiration. Drops that fall upon leaves, plant matter and the soil are either absorbed into the ground, taken in by the roots of plants or undergo a process of entering back into the atmosphere through evapotranspiration. This beautiful cycle enables us to drink the same water that existed millions of years ago. The water cycle: the ultimate recycler. However, changes within this natural system can affect the quality of water, as well as rainfall patterns by shifting the amount of water recharged back into the ground and to plant life.

A dramatic change to this recycling system has been impervious surfaces. Impervious surfaces are the parking lots, driveways, roads, sidewalks, rooftops, and other surfaces that impede the absorption of rainfall. Actions in our daily lives collect on these surfaces, ending up in a storm drain after a rain event. They eventually find their way straight into our waterways. Would you enjoy a Tybee swim with the trash you passed on the sidewalk today? The oil you spotted underneath your car?

Mimicking natural absorption cycles in how we construct our built environment can play a key role in allowing soils to provide their natural filtration capabilities to cleanse water before it returns to our groundwater supplies or surface waterways. Mimicking these absorption cycles also ensures the cycle of evapotranspiration can continue, allowing for normalcy in our climatic patterns.

For more information on Georgia's impervious surface changes over the past 35 years visit: <http://narsal.uga.edu/>.

For a variety of studies and resources on this topic visit: www.mpcnaturalresources.org/water-resources/georgia-storm-water.html.

Do We Fit on Our Planet?

A Water Footprint: What Size are You?

By now we likely each know to turn off the faucet while brushing, reduce our shower time and be more efficient with using water in the garden. However, have you ever thought how much water it took to produce your morning cup of coffee, your new sweater or car?

Although we don't often think of life this way, our natural resources are what support our existence. Food, water and shelter: the basic amenities from which we've come a long way. Water is a fundamental reality to life on Earth. Just as we note the importance of keeping it clean, so must we note the importance of conserving beyond the tap.

Are you interested in learning your total water consumption, your water footprint? Visit www.waterfootprint.org and calculate how your choices add up to multiple gallons.

Water Watchers

Once Cup of Tea = 30 liters
 One Slice Wheat Bread = 40 liters
 One Apple = 70 liters
 One Cup of Coffee = 140 liters
 One Egg = 200 liters
 One Hamburger = 2,400 liters
 1kg Rice = 3,400 liters
 One kg Chicken Meat = 3,900 liters
 1 kg Leather (Your shoes) = 16,600 liters

For more info and sources:
www.waterfootprint.org

How Does Excessive Water Use Affect Water Quality?

The demand for water in the United States creates the need to build dams, dig wells and make withdrawals from our natural water bodies. Using too much water also significantly contributes to nonpoint source pollution. This is when water moves across the ground, collecting pollutants from various sources and eventually depositing them into our drinking water sources. Failing to use water efficiently can hurt our water supply by:

- *Altering stream flows due to excessive withdrawals.
- *Causing saltwater to intrude into freshwater aquifers due to excessive withdrawals.
- *Increasing the amount of dirty runoff water that flows into natural water supplies. This runoff water carries sediments, nutrients, salts and other pollutants and can be caused, among other things, by over irrigating urban landscapes or farm fields. Nutrients such as nitrogen, phosphorus, and potassium are naturally occurring, but habitats can be destroyed when excess amounts of any one nutrient, especially phosphorus, are concentrated in the soil or water.
- *Creating the need to build additional dams. Dams generate nonpoint source pollution by trapping sediment and other pollutants, affecting water quality both upstream and downstream. This concentrates pollutants, causes sediment in the river to pile up, decreases dissolved oxygen and alters water temperatures.

(Courtesy of US EPA: www.epa.gov/watersense)

Need to Get Out? Plant a Rain Garden

Looking for a warm spring activity to get you active and gardening outdoors? Consider planting a rain garden to capture and filter rain that runs off your roof, sidewalks and driveway.

Studies have proven that capturing rain before it enters a storm drain not only replenishes groundwater supplies, but also allows nature to filter any harmful pollutants that may be carried through a storm drain directly into our coastal waterways. For more information on design and maintenance visit:

http://www.lowimpactdevelopment.org/raingarden_design/downloads/BuildRainGarden.pdf

Georgia Urban Forestry Council: Advanced Fundamentals of Tree Conservation on Development Sites April 8, 2009

This new workshop is for professionals who desire to apply tree protection and conservation techniques on land development projects. The entire art of tree conservation will be examined: from the plan review process, to technique application, to follow-up care. This course offering is a must for plan reviewers, construction inspectors, tree board members, code enforcement personnel, design professionals, and private arborists. Lunch provided.

To register: (800) 994-4832 or visit www.gufc.org.

Where: Bamboo Farm and Coastal Garden, Savannah GA

Cost: \$100 GUF members
\$110 non-members



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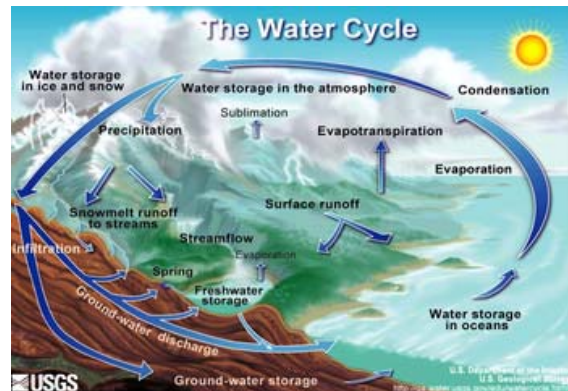
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Find us on the Web:
www.mpcnaturalresources.org

Global Energy and Water Cycle Experiment (GEWEX)

GEWEX, a core project of the World Climate Research Program is an integrated program of research, observations and science activities whose mission is to understand the complexities of the water cycle for predicting global and regional climate change. Water in its various forms plays a dominant role in nearly all aspects of the Earth's climate system. As vapor, it is the Earth's strongest and most plentiful greenhouse gas and a primary carrier of atmospheric energy. Clouds play competing roles in both warming and cooling the atmosphere depending on their composition and altitude. Precipitation controls soil moisture and runoff to the oceans. The cycle is closed by evaporation from both the land and the ocean to the atmosphere. The highest scientific priority for predicting climate change and the goal of the GEWEX is to understand the full cycle of evaporation, cloud formation and precipitation. Phase II of this experiment is planned for completion in 2012. For more information and the results of Phase I visit: www.gewex.org.



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