



Empowering Communities: The RainSmart Initiative

January 16, 2025 | 10:30 a.m. – 11:30 a.m. (Eastern)

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Today's Presenters



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Empowering Communities: The RainSmart Initiative

City of Chattanooga & WaterWays



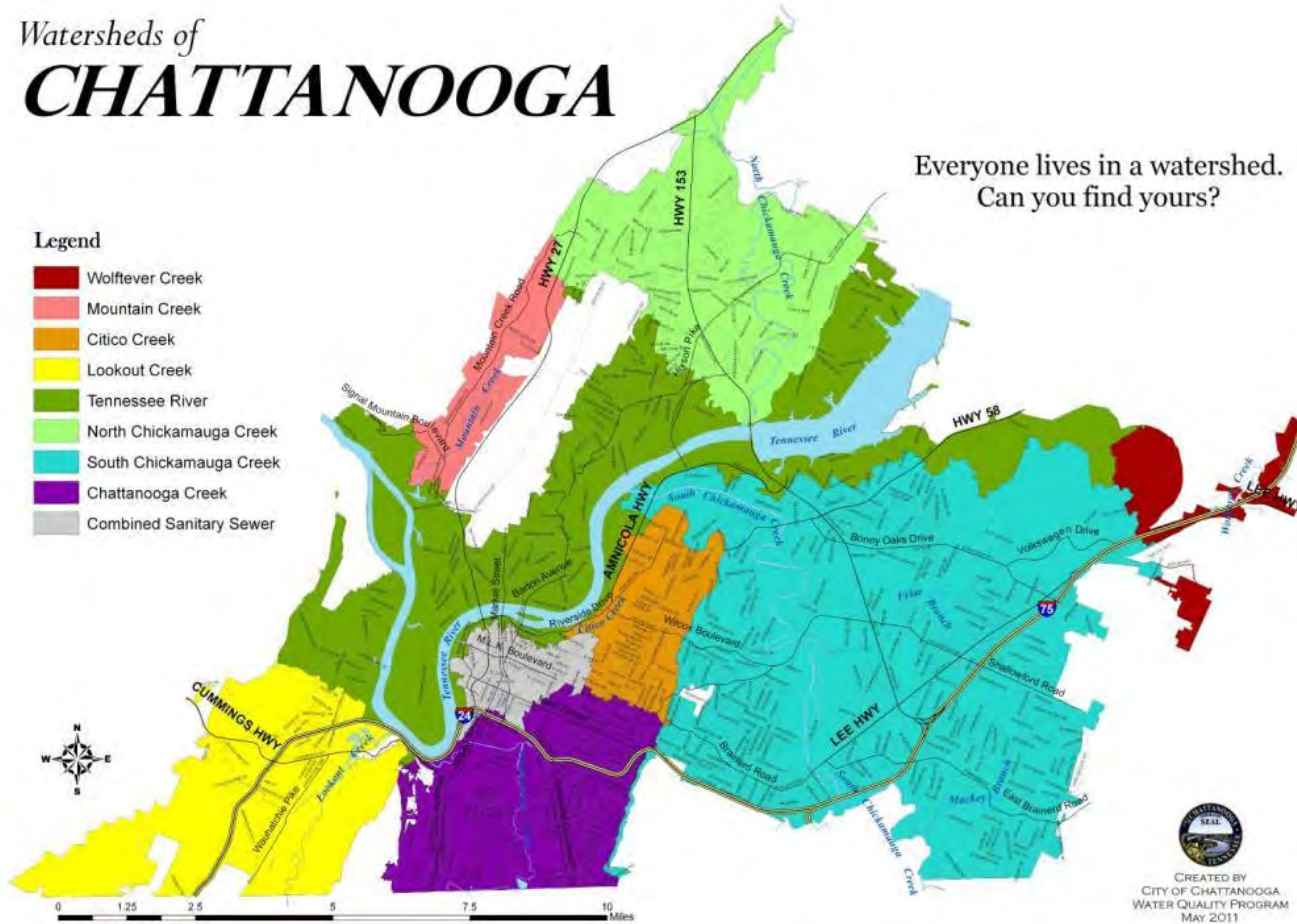


- The City of Chattanooga has eight watersheds and one area referred to as the combined sewer area
 - All eight watersheds in the Chattanooga drainage area flow into the Tennessee River, which flows through the heart of downtown.
-

Watersheds of **CHATTANOOGA**

Legend

- Wolftever Creek
- Mountain Creek
- Citico Creek
- Lookout Creek
- Tennessee River
- North Chickamauga Creek
- South Chickamauga Creek
- Chattanooga Creek
- Combined Sanitary Sewer



Everyone lives in a watershed.
Can you find yours?

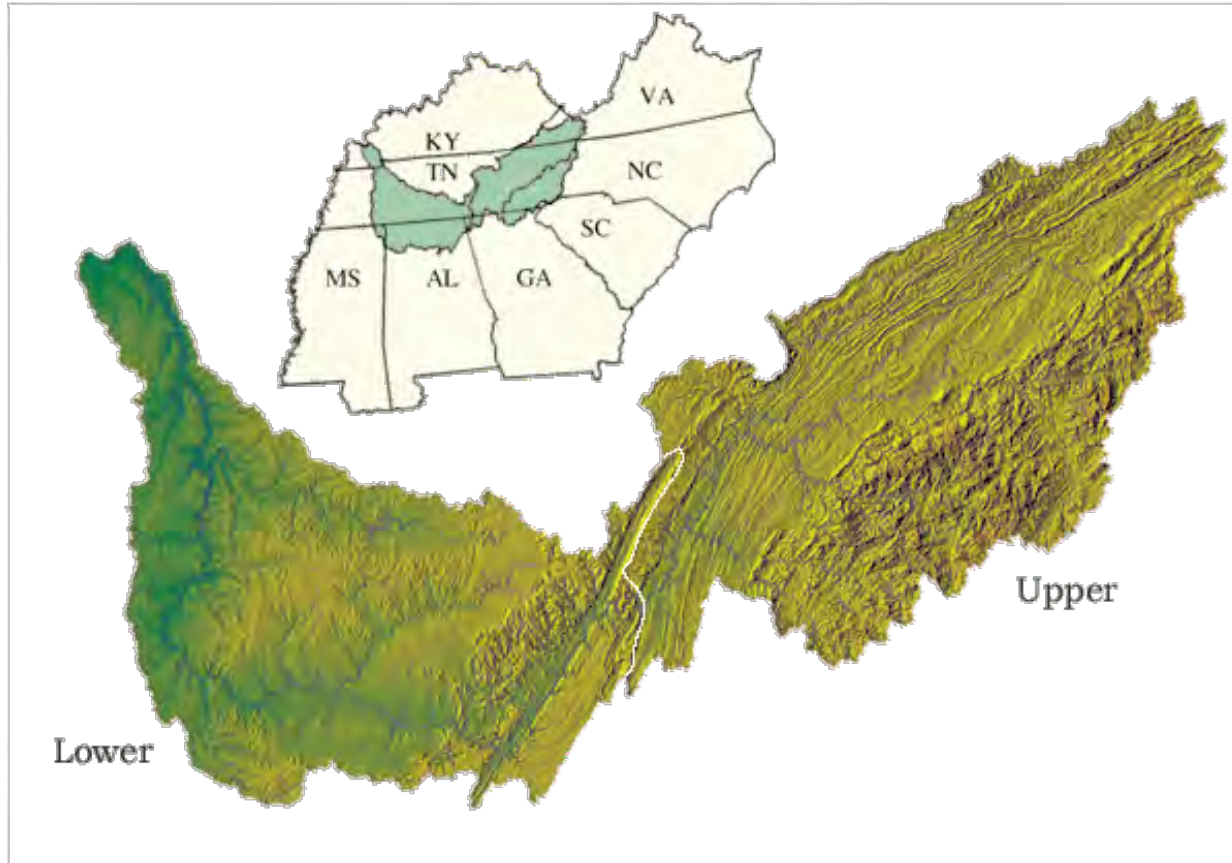
The eight Chattanooga area drainages are:

- Wolftever Creek
- Mountain Creek
- Citico Creek
- Lookout Creek
- Tennessee River
- North Chickamauga Creek
- South Chickamauga Creek
- Chattanooga Creek

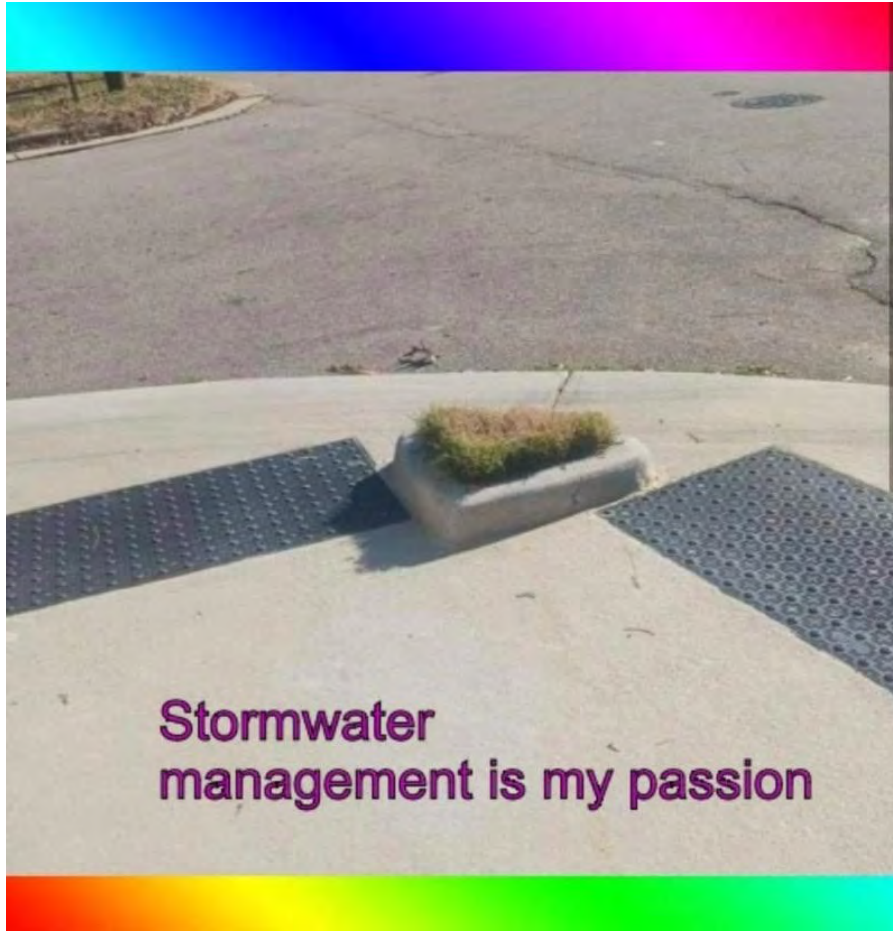


CREATED BY
CITY OF CHATTANOOGA
WATER QUALITY PROGRAM
MAY 2011

Tennessee River Watershed



What is The City's Stormwater Division?



**Stormwater
management is my passion**

- We deal with natural water bodies and stormwater runoff.
- Our mission is to protect the water quality in the City of Chattanooga while achieving 100% compliance with federal and state clean water laws.





“WE EMPOWER COMMUNITIES TO PROTECT AND RESTORE THE
WATERSHEDS WHERE THEY LIVE, WORK, AND PLAY.”



“WE EMPOWER COMMUNITIES TO PROTECT AND RESTORE THE WATERSHEDS WHERE THEY LIVE, WORK, AND PLAY.”

- **Restoration projects:** Stream repair and restoration, Acid Mine Drainage remediation, Stream bank and riparian zone native plantings and invasive removal, riparian buffer zones.
- **Community programs:** Adopt-A-Waterway, RainSmart Yards, Tennessee River Rescue, Green Infrastructure installation, Workshops, Gear Closet.
- **Education programs:** Stream Teams, school programs, teacher training, outdoor classrooms, field trips, summer camps.

GRAY VS. GREEN INFRASTRUCTURE

Gray infrastructure directs stormwater somewhere else. Examples: storm sewer systems and water treatment plants.

Green infrastructure keeps rain where it falls, allowing it to soak into the ground. Examples: rain gardens, bioswales, and green roofs.



Replicating nature / Green infrastructure

- Plants, roots and soils vs. concrete and pipes
- Positively affects air and water quality, city temperatures, aesthetics
- Different maintenance methods could create more jobs
- Zoom out - takes in environment as a whole, uses stormwater as a resource working with the land

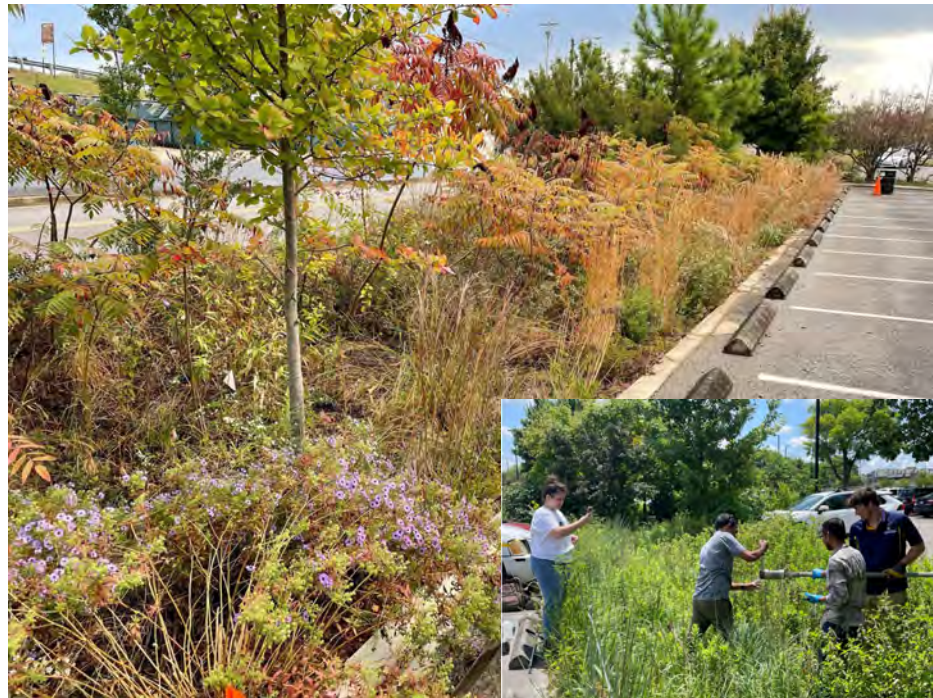


● *Bioretention basin at John A. Patten Rec Center*

Native plants and Green Infrastructure in Chattanooga



Renaissance Park



Warner Park

Let's Talk About



RainSmart



- City of Chattanooga Stormwater Resources residential incentive program
- Goals are: education + incentive
- **RainSmart satisfies these parameters of the NPDES Permit :**
 - Reduce Runoff
 - Watershed Protection
 - Public Outreach and Involvement
- Free assessment of storm water issues & reimbursement for using RainSmart best practices
- Rain gardens, SupportScapes (native plantings), & rain barrels

Rain Gardens

Green infrastructure systems designed to capture and infiltrate runoff from rooftops using amended soils and native plants.

- RG size estimated based on impervious drainage area
- Reimbursement for size/volume + materials + contracted labor

Reimbursement up to \$1000/property

Community Workshop (Optional)

Participants can volunteer their project as a community educational program in partnership with Waterways

RAINSMART RAIN GARDEN REIMBURSEMENT

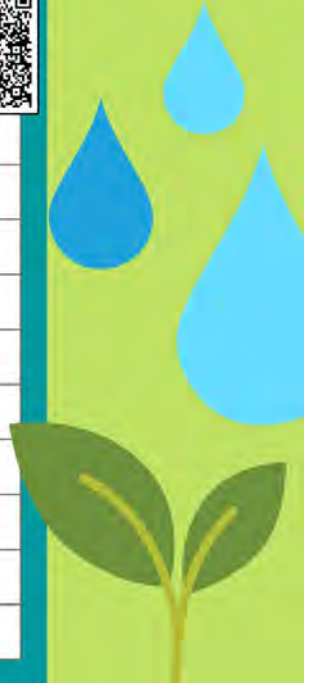
SUPPORT STORMWATER INFILTRATION, WATER QUALITY, AND LOCAL BIODIVERSITY WITH GREEN INFRASTRUCTURE AND NATIVE PLANTS

RAINSMART APPROVED RESIDENTIAL RAIN GARDENS WITHIN THE CITY LIMITS CAN RECEIVE REIMBURSEMENT UP TO \$1000

HOW IT WORKS:



<input type="radio"/>	Submit application →
<input type="radio"/>	Complete initial site assessment
<input type="radio"/>	Submit perc test results for approval
<input type="radio"/>	Submit design & plant list for approval
<input type="radio"/>	Complete phase 1 - subgrade
<input type="radio"/>	Complete subgrade inspection
<input type="radio"/>	Complete your rain garden installation
<input type="radio"/>	Sign & submit Homeowner's Agreement
<input type="radio"/>	Submit itemized receipts
<input type="radio"/>	Complete post-construction inspection
<input type="radio"/>	Receive your reimbursement check!



SupportScapes

Intentional planting of native plant species to mimic stormwater mitigation that naturally occurs in meadows, forests, and other ecosystems.

- Dense planting of 10+ native species
- Reimbursement of 75% of rebate eligible costs - native plants, compost, and mulch

Reimbursement up to \$500/property

***NEW!* Community Workshop (Optional)**

Participants can volunteer their project as a community educational program in partnership with Waterways

SUPPORTSCAPES NATIVE PLANT REIMBURSEMENT


NATIVE PLANTINGS TO IMPROVE
STORMWATER MITIGATION, EROSION
CONTROL, AND LOCAL BIODIVERSITY

RAINSMART APPROVED NATIVE PLANTINGS
WITHIN CITY LIMITS MAY BE ELIGIBLE FOR
REIMBURSEMENT

COST SHARE - REIMBURSEMENT OF 75% OF
ELIGIBLE COSTS, UP TO \$500 PER
PROPERTY

HOW IT WORKS:



<input type="radio"/>	Submit application 
<input type="radio"/>	Complete initial site audit
<input type="radio"/>	Submit design & plant list for approval
<input type="radio"/>	Install your SupportScape
<input type="radio"/>	Sign & submit Homeowner's Agreement
<input type="radio"/>	Submit itemized receipts
<input type="radio"/>	Complete post-construction inspection
<input type="radio"/>	Receive your reimbursement check!



Rain Barrels

Installation of rain barrels to collect stormwater runoff from impervious surfaces (roof, driveway, etc.)

**Reimbursement of \$50 per barrel,
up to 10 barrels or \$500/property**

Annual Rain Barrel Distribution Day


City & non-city community members receive 2 barrels at a subsidized price (\$39-\$49/barrel) per household

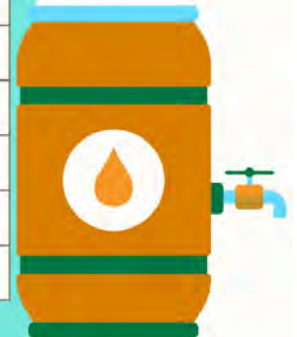
RAINSMART RAIN BARREL REIMBURSEMENT

KEEP OUR WATERWAYS CLEAN WITH
RESIDENTIAL RAINWATER
COLLECTION

RAINSMART APPROVED RAIN
BARRELS WITHIN CITY LIMITS CAN
RECEIVE REIMBURSEMENT OF UP TO
\$50 PER RAIN BARREL

HOW IT WORKS:

- | | |
|-----------------------|--|
| <input type="radio"/> | Submit application  |
| <input type="radio"/> | Install your rain barrel(s) |
| <input type="radio"/> | Sign & submit Homeowner's Agreement |
| <input type="radio"/> | Submit itemized receipts |
| <input type="radio"/> | Complete post-construction inspection |
| <input type="radio"/> | Receive your reimbursement check! |



16,361 gallons captured per 1" rain event & 80 native gardens planted!





1055

Let's Talk About



RainSmart
yards

RainSmart Yards

FREE program!

In person survey + sustainable yard advice for stormwater management.

Plant identification, yard walk, fun conversation!

If awarded: “RainSmart” yard sign!

Summary report listing achievements and “next steps” for your yard.

The more yards incorporating these practices = reductions in stormwater runoff and sewer overflows





City resident incentives – \$\$\$

City of Chattanooga residents:

Annual water quality fee discount:

- Bronze = 25% off
- Silver = 50% off
- Gold = 75% off

Water quality fee was ~\$183 in 2023

RainSmart reimbursement program

RSY Criteria	Yes	No	N/A	Yes	No	N/A	Recommendations
Located within City limits?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	All toxic substances recycled or disposed of properly?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All downspouts exit on property/garden?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Swimming pool backwash & drainage buffered?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Invasive species present?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Pet waste disposed of or buffered 30 ft?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are they being actively controlled?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Septic system working properly/not leaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are they being actively eradicated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Yards on a waterway, is there a buffer of native plants?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Native plants incorporated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Buffer zone at least 5 ft?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Spring pollinator species	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Rain garden or other green infrastructure?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
				Rain barrels/rain collection systems?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
				Environmentally safe sealers used on paved surfaces?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fall pollinator species	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Best management practices implemented for erosion?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
				Fertilizers used?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
				if yes, is soil pH tested?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Summer pollinator species	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Native trees planted?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
				Natural/organic fertilizers only?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
				Extra green infrastructure?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pesticides or herbicides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	100% of stormwater contained?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sprinklers used responsibly?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
Lawn mowed no shorter than 3 inches?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
Grass clippings/leaves left in place or composted?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
Mulch without added dyes?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
All trash properly disposed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				

Additional Comments

Award Status

- ★ Bronze ★
25% off Water Quality Fee!
- ★ ★ Silver ★ ★
50% off Water Quality Fee!
- ★ ★ ★ Gold ★ ★ ★
75% off Water Quality Fee!
- 🌊 Honorable Mention 🌊
Follow our recommendations and re-survey!

Surveyor: _____

Date: _____

Collaboration



Litter boom - Chattanooga Creek



J22-026 Data Summary Chattanooga Litter Boom

Litter Boom

Chattanooga Creek_St. Elmo Ave

	Amount - Recycle		Amount - Dispose		Amount - Total		Debris
	Lbs.	cf	Lbs.	cf	Lbs.	cf	Lbs.
Jun-23	43.57	29.00	379.74	68.00	423.31	97.00	242.03
2023 / Q2 Total	43.57	29.00	379.74	68.00	423.31	97.00	242.03
Site Total	43.57	29.00	379.74	68.00	423.31	97.00	242.03
Totals to date	43.57	29.00	379.74	68.00	423.31	97.00	242.03

Debris - Things other than floating litter that are caught by the Litter Boom - these numbers are not included in the overall total to date

Rain Garden Workshop



11-12-23

1:00 - 3:30pm

Learn to build your own RainSmart-approved rain garden with this hands-on workshop in the East Lake Community!
Lunch will be provided.

Visit our Eventbrite to register.



WILD WANDER: Plant Natives Weekend

Join WaterWays this weekend at Wild Wander!

Native Plant Sale and Expo

Saturday, April 13, 2024, 9 am - 2 pm

First Horizon Pavilion

1826 Reggie White Blvd.

Chattanooga, TN 37408

Free Event, Open to the Public

Rain Garden Workshop with WaterWays and the City of Chattanooga

Sunday, April 14, 2024, 11:30 am - 1:30 pm

Residence in St. Elmo

Free Event, Registration Required

Interpretive Wildflower Walk at Shirley Miller Wildflower Trail

With WaterWay's Executive Director, Mary Beth Sutton

Sunday, April 14, 2024, 2:30 pm - 4:00 pm

Registration Required

*Registration link in our bio





Rain Garden Workshop

Tuesday, October 29, 9am-1pm
2009 Curtain Pole Rd, Chattanooga, TN 37406



Learn to build your own RainSmart-approved rain garden at this hands-on workshop at the Chattanooga Area Food Bank!



Scan the QR code to register. Registration closes on October 24 and is required for this event. This event is free and open to the public. Lunch is provided by the City of Chattanooga.





Conservation & Corks




An Evening of Wine & Environmental Engagement




Pop-up market with local vendors selling native plants, outdoor gear, raffles, food, and MORE!

Market : 5-7pm
Wine Tasting : 5:30pm
Nature Trivia : 7pm



 **50/50 Wine Bar**
43 Station St,
Chattanooga, TN 37408

A portion of proceeds from 50/50 will benefit conservation in the Chattanooga Area!

September 18, 2024
5-9PM 



Adopt - A- WaterWay: Sponsored by the City of Chattanooga

ADOPT-A-WATERWAY WITH WATERWAYS!

Improving water quality as a whole starts locally.

Adopt a section of stream near you today! This is a simple, free, and effective program for *any* group.

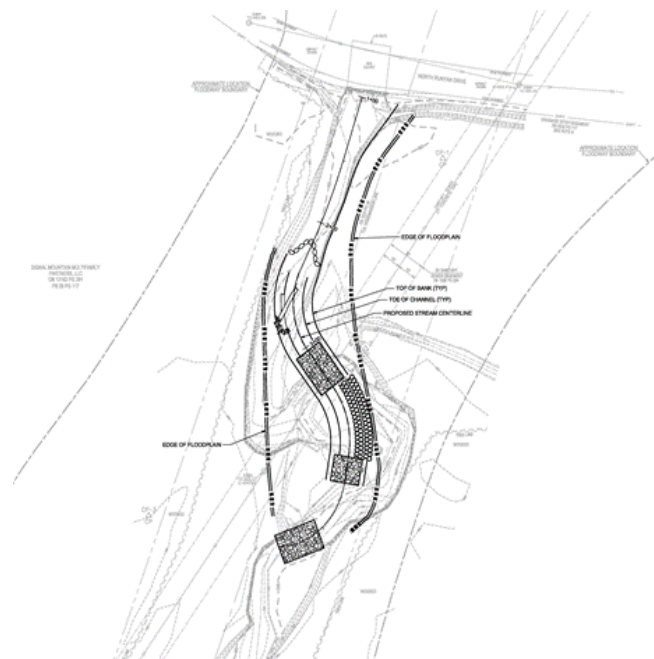
Help us keep our watersheds healthy for generations to come!



Current Projects: WaterWays x City of Chattanooga

319 grant + ARP funding for reducing streambank erosion in the Mountain Creek watershed

- Quail Hollow neighborhood and Red Bank High School campus
 - City of Chattanooga is providing hydraulic study and engineering design
 - WaterWays will implement! - RBHS engineering students will learn design and construction
- Mountain Creek Church of Christ
 - City of Chattanooga is providing no-rise hydraulic study and permitting assistance
 - WaterWays will implement restoration projects!
- Spring Valley neighborhood
 - Repairing stream banks, using natural channel design, improving access



MOUNTAIN CREEK STREAM BANK STABILIZATION & RESTORATION

Through a thoughtful collaboration between Propex Geosolutions, WaterWays, and the Red Bank Elementary School Stream Team with support from local stakeholders, this Mountain Creek restoration was completed in January of 2018.

OUR PROBLEM

The Red Bank Elementary School Stream Team identified a problem with the stream bank erosion and sedimentation in the stream bed.

OUR SOLUTION

Our solution was to install a bio-retention structure to stabilize the stream bank and reduce erosion. The structure was designed to filter sediment and debris from the stream bed, while allowing water to flow through. The structure was made of natural materials and was designed to blend with the surrounding environment.



THE MOUNTAIN CREEK COMMUNITY



RIPARIAN ZONES

Riparian zones exist on the edge of land on the edge of a stream or body of water. These areas are very important for the health of the environment. They add the beauty to the landscape and provide habitat for many species. Riparian zones are the link between the land and the water. They help to stabilize the stream bank and prevent erosion. They also help to filter sediment and debris from the stream bed, keeping the water clean and healthy for animals like fish, amphibians, and others to live.





Streambank repair workshops

- Annual workshop hosted by WaterWays and UT Ag Extension.
- Low-cost, ecological-based methods for streambank repair.
- Next workshop date is February 21, 2025!



STREAMBANK REPAIR WORKSHOP

With Experts:
DR. ANDREA LUDWIG
Associate Professor of
Ecological Engineering, UTK
&
MARY BETH SUTTON
Executive Director, WaterWays

9:30 - 12:30

February 16th OR 17th

Walden's Ridge Park

REGISTER ON
OUR EVENTBRITE



Streambank repair workshops



TENNESSEE RIVER RESCUE

- Now run by WaterWays
- 36 years and counting! 3 states, 45 sites
- City provides dumpsters for city sites.
- City sponsors a River Rescue site!



Christine Hunt and Nancy Brice, former coordinators and founders of the TN River Rescue celebrate 33 years of clean-ups.



TIMESFREEPRESS.COM

Good Deed: 33rd Tennessee River Rescue a huge success
WaterWays, a regional nonprofit focused on empowering communi...



**HUNDREDS OF
VOLUNTEERS**



**OVER 1000 POUNDS
OF TRASH COLLECTED**



**HEALTHIER
COMMUNITY**

Challenges of Collaboration

new solutions & collaboration opportunities!

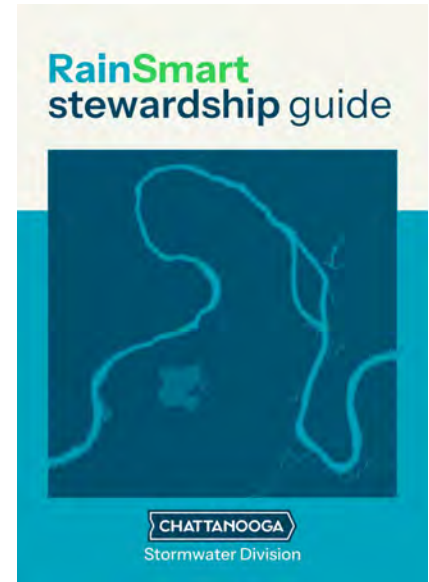
Time overlap




Branding / messaging



Code compliance



A photograph of a vibrant garden. A green lawn path curves through the center, bordered by a low wall of smooth, light-colored stones. The garden is filled with various plants, including numerous pink and yellow flowers, likely asters and coneflowers, and dense green foliage. In the background, a white car is partially visible through the trees.

If half of American lawns were replaced with native plants, we would create the equivalent of a 20 million acre national park, 9X bigger than Yellowstone, or 100X bigger than Shenandoah National Park

**CHATTANOOGA
NATIONAL
PARK CITY***



CHATTANOOGA
PARK STEWARDS



Thank you!

Contact info:

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