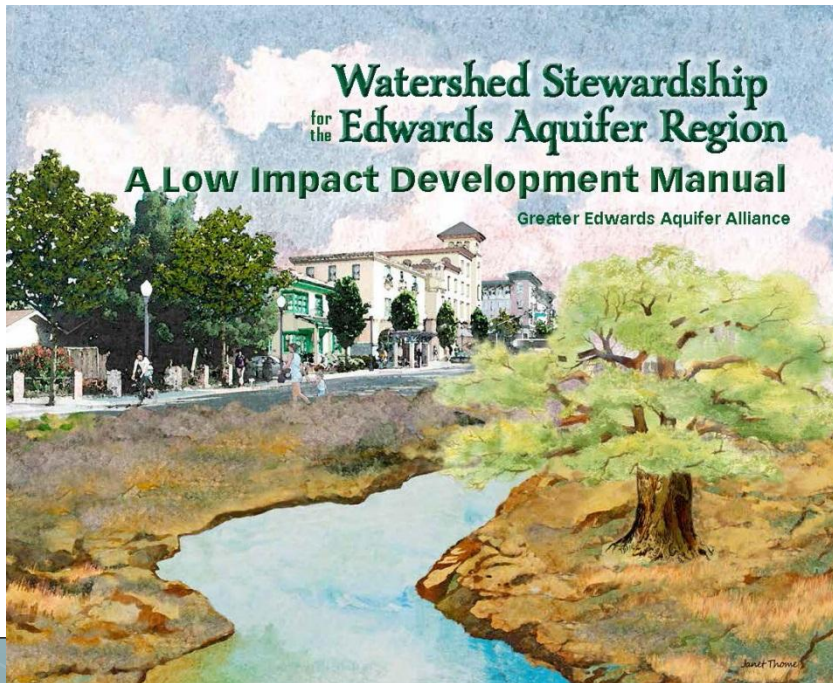
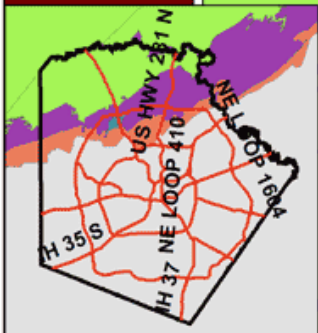


# Community Rain Gardens and Under Your Feet Campaign

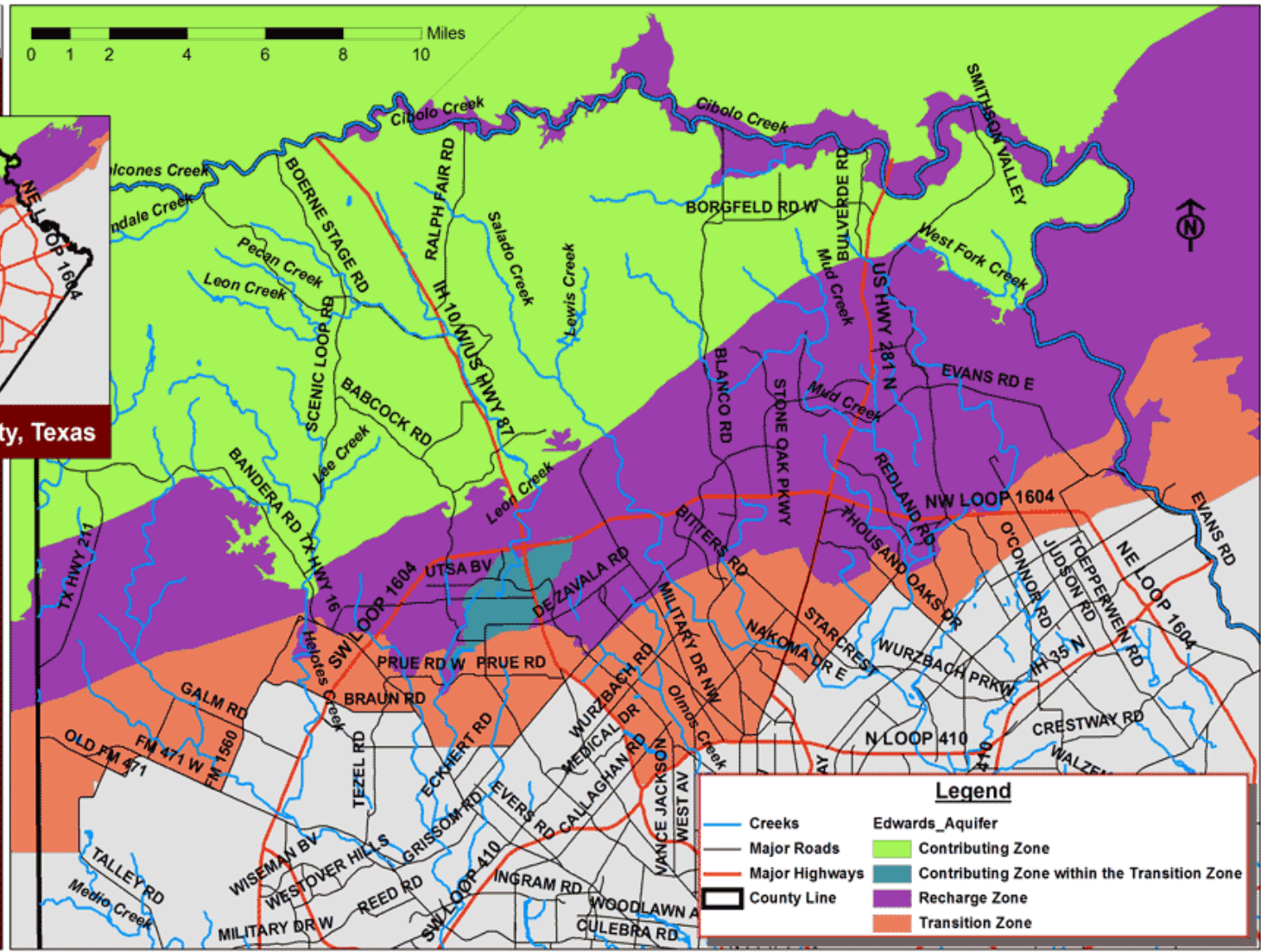




Bexar County, Texas

## Edwards Aquifer in Bexar County, Texas

October 7, 2005



**Legend**

	Creeks		Edwards_Aquifer
	Major Roads		Contributing Zone within the Transition Zone
	Major Highways		Recharge Zone
	County Line		Transition Zone

**The Texas Commission on Environmental Quality (TCEQ) has designated the Edwards Aquifer as the major aquifer in the state most vulnerable to pollution.**

Little to no filtration is provided as water enters directly into the Aquifer through faults, stream beds, and terrain characterized by uniquely porous Edwards limestone.



**The Edwards is a uniquely prolific aquifer characterized by rapid groundwater recharge and rapid open channel flow.**



This rock also makes the Edwards uniquely prolific.



# Regulations permit extensive site modification thus altering the hydrologic regime



- Sand filter is prevalent BMP across the Edwards/Trinity region
- Edwards Rules treat storm water as a pollutant

## On the Edwards Recharge Zone:

- Up to 85% impervious cover allowed in San Antonio
- Up to 100% impervious cover allowed under State Law

Low Impact Development systems are designed to work with the natural hydrologic patterns that exist before a site is developed. LID utilizes small scale networked landscape features – such as rain gardens – that treat storm water runoff on site. Treated runoff can gradually infiltrate into groundwater – in this case the Edwards Aquifer.

Strategies based on preserving pre-development hydrology and maintaining critical vegetated areas can minimize groundwater pollution and flooding in geologically sensitive karst regions, such as the Edwards Aquifer Recharge Zone.

# Watershed Stewardship for the Edwards Aquifer Region

## A Low Impact Development Manual

Greater Edwards Aquifer Alliance

Low Impact Development (LID) is an environmentally-friendly approach to developing land and managing storm water runoff that uses natural vegetation to treat storm water close to where it originates and allow it to infiltrate into the aquifer.

LID emphasizes conservation and use of on-site natural features to preserve water quality.

[http://www.aquiferalliance.net/Library/GEAAPublications/GEAA\\_Manual.pdf](http://www.aquiferalliance.net/Library/GEAAPublications/GEAA_Manual.pdf)





# New GEAA Programs for 2015 – Community Rain Gardens

GEAA proposes to work with Home Owners Associations, schools, and businesses to create Community Rain Gardens, similar to the many community garden programs popular throughout the United States. GEAA will teach homeowners how to maintain existing water quality structures and will engage them in installing Low Impact Development (LID) projects such as swales, rain gardens, and specific plantings to enhance filtration of stormwater before it enters the Aquifer. Landscape architects with expertise in LID will be employed to design and help homeowners to properly install and maintain site specific LID enhancements.

We hope to educate homeowners on the Edwards Aquifer Recharge Zone how to identify and report non-compliant systems, to enhance the function of the systems in their neighborhoods, to understand the need to use drought tolerant plants for water conservation, and to generally educate them on the importance of protecting the Edwards Aquifer.

## Under Your Feet Campaign

GEAA is contracting Western Kentucky University to produce a campaign to educate people who live on the Recharge Zone on how to protect the Aquifer.



# Community Rain Gardens

## Partners:

- Wells Fargo Environmental Solutions for Communities Initiative of the National Fish and Wildlife Foundation \$52,650.00
    - SXSW Community Fund \$10,000.00
    - San Antonio River Authority \$15,000.00
    - Edwards Aquifer Authority \$45,000.00
    - University of Texas at San Antonio
    - City of San Antonio
    - City Council Districts 8, 9, 10 \$9,000.00
    - and...
      - Home Owners Associations
      - School Districts
      - Native Plant Society of San Antonio
      - Master Gardeners of San Antonio
      - Area Businesses
      - And others

# Community Rain Gardens

## 10 rain gardens/Low Impact Development projects for San Antonio

- The UTSA College of Architecture will deliver a report to inform the siting, signage, and maintenance of future projects – June 2016
- GEAA will deliver report to inform the City of San Antonio on selection of projects receiving \$10 million for LID projects enhancing the Edwards Aquifer Protection Program.
- First project will be on the northwest campus of UTSA – Spring 2016
- UTSA College of Civil Engineering will work with SARA and EAA to monitor effectiveness of LID in improving water quality
- GEAA will meet with City Council Representatives, Home Owners Associations, School Districts to select sites and design projects
- GEAA will work with SARA, Native Plant Society of SA, Master Gardeners of SA, and Home Owners Associations/Schools to install 9 Community Rain Gardens – 2016
- GEAA will work with HOA's to ensure monitoring and maintenance of projects.

**GEAA**

Greater  
Edwards  
Aquifer  
Alliance



**Our Goal is to go from this...**



... to this – infiltrating clean rain water into the aquifer, saving water-  
What's not to like?


# Under Your Feet Campaign

GEAA will work with Western Kentucky University and local partners to create a media campaign aimed at people who live, work, and play over the Edwards Aquifer Recharge Zone.

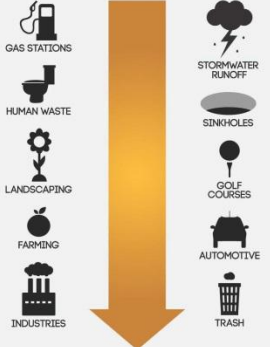
KARST  
GROUNDWATER  
**quality**


The number one cause of pollution in Florida's water bodies is stormwater runoff. What we do above the ground affects everything down below. visit [WaterMatters.org](http://WaterMatters.org) for more info

**GO WITH THE FLOW**  
Water can rapidly travel from the surface to subsurface in karst areas. As rain falls and flows over the landscape, the runoff picks up pollutants and eventually seeps into the ground where it replenishes aquifers, wells and springs.



**FAIRWAYS, FREEWAYS, FARMS & FRONT YARDS**  
The runoff carries pollutants such as litter, motor oil, gasoline, fertilizers, pesticides, pet wastes, sediments and anything else that can float, dissolve or be swept away by moving water into the karst aquifer down below.





**#1**

The number one cause of pollution in Florida's water bodies is stormwater runoff.

**50x OVER & UNDER**

The limestone that underlies Florida does not do a good job protecting water from pollution, so nitrate levels in local springs are increasing, partially because of improper fertilizer use. Nitrate levels throughout the Floridan aquifer have been found to be 50 times greater



This project has been a long time coming!

We wish to thank Wells Fargo  
and the National Fish and Wildlife Foundation,  
SXSU Community Fund,  
and our local partners.

GEAA will be seeking matching funds  
for these projects and additional partners.

If you'd like to get involved contact  
The Greater Edwards Aquifer Alliance

To learn more, visit [www.AquiferAlliance.org](http://www.AquiferAlliance.org)

Thank you!