

## **Request for Coverage**

### **Greater Edwards Aquifer Alliance and Texas State University students partner to map Sewage Leaks on the Edwards Aquifer Recharge Zone**

A team of four students from Dr. Yongmei Lu's Geographic Information Science class at Texas State University (TSU), working with the Greater Edwards Aquifer Alliance (GEAA), have created a map of sewage leaks within the Edwards Aquifer Region. The interactive map, part of on-going research that GEAA is conducting to determine the impact of sewage on the Edwards Aquifer, displays detailed information about all documented sewage leaks that occurred during the past eight years within Texas Commission for Environmental Quality's [Region 13](#) in South Central Texas.

The interactive maps, which display location, date, volume, and cause of spills, can be viewed by the public on [GEAA's web site](#). Among the findings of this study is that between 2008 and 2012 eighty three sewage spills totaling 809,000 gallons (or 2.5 acre feet) of raw sewage occurred on the Edwards Aquifer Recharge Zone. Because the Edwards Aquifer does not filter surface water runoff on the Recharge Zone this is cause for concern. Additionally, many of the leaks were in close proximity to streams and creeks, where recharge of the aquifer is most likely to occur.

The TSU students worked with a team of experts from GEAA's Technical Advisory Team who are researching the Impact of On Site Sewage Facilities (septic tanks) vs. Centralized Sewage Systems on the Edwards Aquifer Recharge Zone. TSU Team member and GIS Analyst for the project, Amy Woods, noted that "We used GIS to spatially look at the distribution of spills that occurred over the Edwards Aquifer. It was amazing to see a list in Excel go from just a bunch of words with no meaning to a visual representation which can be used to really give the public a greater understanding of the quantity and volume of spills that occur in such an ecologically sensitive area."

The research is part of an on-going partnership with TSU; this coming semester a new team of TSU students will be mapping sewage leak data from TCEQ Region 11. GEAA's goal is to produce a White Paper that will examine all aspects of regulation of sewage within the Edwards Aquifer Recharge Zone, including an overview and assessment of current regulatory and agency practices, recommendations for improvements, and estimates of leakage that might determine which method of sewage disposal poses the greatest threat to the Edwards Aquifer.

The agencies tasked with oversight of water quality of the Edward Aquifer, most notably the TCEQ and the Edwards Aquifer Authority (EAA) rely on the use of storm water management as the chief strategy for protecting water quality of the Edwards Aquifer. Measures to address the quality of storm water infiltrating the Edwards, however, provide no protection from the introduction of subsurface pollution of the aquifer from human sewage, which becomes particularly problematic with increased high density residential development of the Edwards Aquifer Recharge Zone.

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The Greater Edwards Aquifer Alliance unites forty-five member organizations behind a comprehensive plan to protect regional karst aquifers, their springs and watersheds, and the Texas Hill Country.

**For more information visit [www.AquiferAlliance.org](http://www.AquiferAlliance.org)**