

OCTOBER 2024

TEXAS A&M  
AGRI LIFE  
EXTENSION

GERONIMO & ALLIGATOR  
WATERSHED PARTNERSHIP

# The Geronimo Flow

Geronimo & Alligator Creeks Watershed Partnership



Have you been looking for a chance to get involved and connect with the Geronimo and Alligator Creeks Watershed Partnership? Join us in Seguin or New Braunfels on October 19 for the Fall cleanup! Twice a year, we work together to remove litter and waste from the watershed. Participants receive free breakfast, coffee, and event t-shirts as available. This is a great opportunity to get outside, build volunteer hours for your organization, and make a difference in your community. Find registration details in the calendar on the last page of this newsletter.

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## Newsletter Highlights

A Note from Your Watershed Coordinator

Measurements Matter: Temperature

Upcoming Events 2024

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GeronimoAlligator](https://www.facebook.com/GeronimoAlligator)

TEXAS STATE  
Soil & Water  
CONSERVATION BOARD

Funding for this effort is provided through a Clean Water Act §319(h) Nonpoint Source Grant administered by the Texas State Soil and Water Conservation Board from the U.S. Environmental Protection Agency.

# MEASUREMENTS MATTER: TEMPERATURE

As the fall season approaches in Texas, we might get excited about the prospect of a change in temperature. But how does temperature effect water quality in Geronimo and Alligator Creeks? This is the second article in a series exploring the water quality data collected in our watershed and why it matters.

**Temperature** is a measurement of how hot or cold a given substance is. Scientifically speaking, it is an assessment of the average kinetic energy of the molecules present.

Typically, we will discuss temperature in terms of degrees Fahrenheit ( $^{\circ}\text{F}$ ) or in degrees Celsius ( $^{\circ}\text{C}$ ). But what is the relationship between water temperature and water quality?

A variety of water quality measurements are influenced by water temperature. Aquatic plants, insects, and animals are all adapted to survive in a limited temperature range. Just like people, if the temperature isn't right, they will not live in a particular environment. One reason is that when water temperature rises, there is less dissolved oxygen available. Temperature also influences the rate of aquatic chemical reactions and the survival and reproduction rate of bacteria.



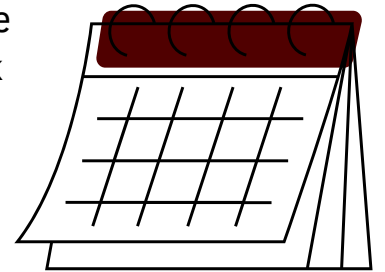
**Daily variations** in temperature are especially important when considering bacteria in the creek. In our watershed, daily variations in air temperature are often between 20-30  $^{\circ}\text{F}$  (e.g. 70 $^{\circ}\text{F}$  at night and 90 $^{\circ}\text{F}$  during the day). Daily water temperature variation can be smaller, perhaps 5-15 $^{\circ}\text{F}$ . Fecal indicator bacteria, like *E. coli*, will increase in their ideal temperature range and decrease when exposed to temperatures above or below that range. Thus, it is critical to consider the temperature when comparing data on *E. coli* concentrations. When taking water quality samples in Geronimo and Alligator Creeks, we are sure to sample sites at the same time of day to help account for temperature variations. We measure temperature because it matters!

# Watershed Calendar

## Winter

### Oct 19 - Geronimo and Alligator Creeks Fall Cleanup

Register to attend at [geronimocreek.org](http://geronimocreek.org)! Free t-shirts, breakfast, coffee, and community will be available for all who attend. Check the Facebook page for updates!



## Upcoming Events - Spring 2025

### Feral Hog Management Workshop

If you have a feral hog issue, this event is for you. We will have local and state experts give presentations, demonstrations, and answer your most important questions about feral hogs.

### Spring Cleanup

Can't make it for the Fall Cleanup this year? Don't worry, the Spring Cleanup is even bigger and better! Held in April, this event is a great opportunity to get out and make a difference in your community.

### Aerobic Septic Maintenance Workshop

If you have an aerobic septic system, take advantage of this great program! Septic system function, maintenance, and best management practices are all covered. Q&A at this event is always a hit, too.