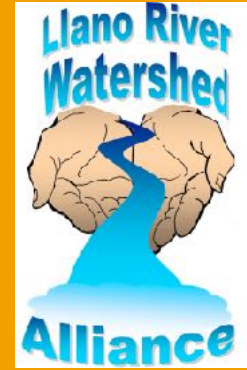


WATERSHED WEEK IN REVIEW



Combating Climate Change

Dr. David Hillis
Mason Science Corner -
Mason County News

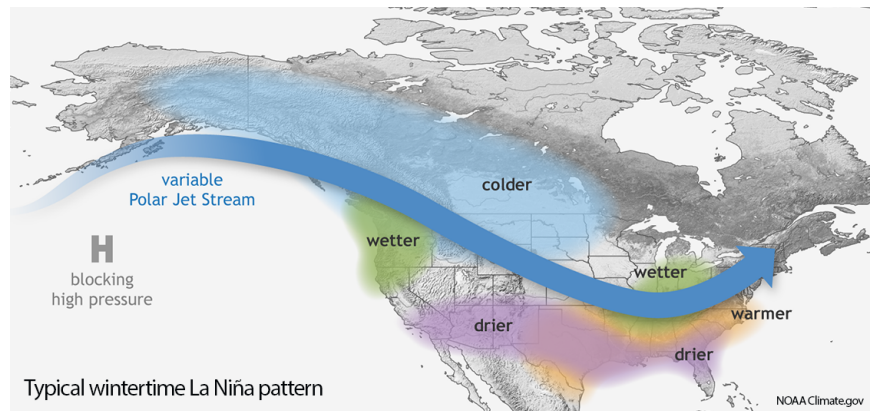
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A topic that appears to be on many readers' minds is global climate change. Is it real? How serious is it? When will it affect Mason County? How will it affect Mason County? Is there anything we can do about it?

Let's begin with the fact of global climate change. There is no doubt that the Earth is warming rapidly at present. We set new records for global heat almost every year now. The increase may seem slow in terms of a human lifetime,

[continue reading](#)

La Niña likely to bring Warm and Dry Winter



NOAA's winter forecast for the U.S. favors warmer, drier conditions across the southern tier of the U.S., and cooler, wetter conditions in the North, thanks in part to an ongoing La Niña. Forecasters at NOAA's Climate Prediction Center — a division of the National Weather Service — are also closely monitoring persistent drought during the winter months ahead, with more than 45% of the continental U.S. now experiencing drought.

[Read more](#)

Pristine to Polluted - Sewage Problems and Solutions in the Texas Hill Country

Part III

We continue our discussion regarding Wastewater Treatment Plants with a data update, some additional information, and an offering of some suggested resources.

The recent enforcement action by the Texas Commission on Environmental Quality (TCEQ) against the City of Junction in the form of a \$12,950 fine was for the period November 2018 through August 2019. According to self-reported data in the ECHO database (Enforcement and Compliance History Online), the City continues to experience problems at the plant (see chart on page 3) especially with *E-coli* or bacteria. TCEQ utilizes two different sampling methods for *E-coli*, an indicator organism to test the effectiveness of effluent disinfection in a wastewater treatment plant (more details here). The standards are set in the City's permit to protect primary contact recreation such as wading, swimming, kayaking and canoeing.

The City of Junction isn't the only facility in the Llano watershed that has received recent enforcement action from TCEQ. Back in August of 2020, the City of Mason was penalized \$3,500 primarily for exceeding their Ammonia Nitrogen discharge standards in January - April of 2019. According to the ECHO database, the City again exceeded those standards in January and February of this year. Ammonia is very toxic to fish and Ammonia Nitrogen standards can be indicative of nutrient pollution.

Editors Note: The numbers presented in ECHO database represent the percent sample exceeded the permitted amount)

See technical and financial resources on page 4

City of Junction Wastewater Treatment Plant Effluent Discharges

Monitoring Period	Biochemical Oxygen Demand (5-day) Daily Average Concentration Limit = 30 mg/L	E-coli Daily Average Concentration Limit = 126 CFU/100 ml	E-coli Single Grab Concentration Limit = 399 CFU/100 ml
Nov 2018	36.25	c	980
Dec 2018	31	162	816
Jan 2019	33.4	c	c
Feb 2019	61.25	1077	2,420
Mar 2019	49.75	c	1,120
Apr 2019	55	c	c
May 2019	46.8	157.5	c
Jun 2019	32	c	c
Jul 2019	c	150	c
Aug 2019	30.25	c	c
Sep 2019	c	c	c
Oct 2019	33.0	192.8	c
Nov 2019	45.9	287.3	546
Dec 2019	53.7	1,018	2,421
Jan 2020	44.1	369.2	686.3
Feb 2020	c	330.1	1,204
Mar 2020	31.5	512.8	1,300
Apr 2020	c	432.2	1,987

C = Compliance.

Shaded area are months not covered in most recent TCEQ Enforcement Action

Technical & Financial Resources for Wastewater Treatment Facilities

TCEQ provides regulatory guidance for troubleshooting bacteria levels at plants and also provides tips on how to address other specific wastewater treatment problems. In addition, Texas Water Development Board (TWDB), along with several other agencies, provide financial assistance to wastewater systems in rural communities.

Clean Water State Revolving Fund, authorized by the Clean Water Act, provides low-cost financial assistance (below market interest rate loans and loan forgiveness) for planning acquisition, design and construction of wastewater, reuse and stormwater infrastructure. This fund could be used for wastewater recycling and reuse improvements such as conversion of the Junction system from discharge to the Llano River to land application

The Texas Water Development Fund is a state loan program which provides low-interest loans for funding components of water and wastewater systems.

Economically Distressed Areas Program provides financial assistance through loans and grants for projects serving economically distressed areas where water or sewer services do not meet minimum state standards. The City of Junction qualifies as the median household income is not greater than 75% of the median state household income. (Junction is 56%).

Rural Water Assistance Fund assists small rural (less than 10,000) utilities with obtaining low-cost financing for water and wastewater projects.

USDA Rural Utilities Service maintains a Water and Environmental Programs providing loans, grants and loan guarantees for drinking water and sanitary sewer in rural communities of 10,000 or less.

Matthew McConaughey's life lesson from the Llano

By Kristyn Burt
sheknows.com



Image Source: Matthew McConaughey on WhoSay

...most recently, McConaughey shared a scary experience that became a life lesson when he was only four years old. "I was 4 when my mother left me to sink or swim," the actor tells the *Wall Street Journal*. "That summer, at the house of her friend in central Texas, we waded into the Llano River. I'd already had a few swimming lessons," says McConaughey. "Within minutes, I wound up in water over my head. Mom backed up and got out. As the current slowly began to take me downriver, she walked along the bank at the same pace."

McConaughey's mom was testing his confidence in the water. "I flailed and Mom shouted, 'Swim! Or you're going over the falls.' I panicked, but quickly lowered my head in the water, kicked and used my arms to reach the bank," he writes. "Coming out, I wasn't angry. I was proud of myself."

McConaughey views this situation as his mother's way of proving he had the skills to get himself out of a potentially dangerous moment. "Mom prepared me to be an actor long before my first audition," he explains. "She'd say, 'You don't walk into a room like you want to buy the place. You walk in like you own it.'"