



# Dry Comal Creek and Comal River Watershed Protection Plan Implementation Update

Phillip Quast  
Watershed Coordinator  
City of New Braunfels

April 28, 2022

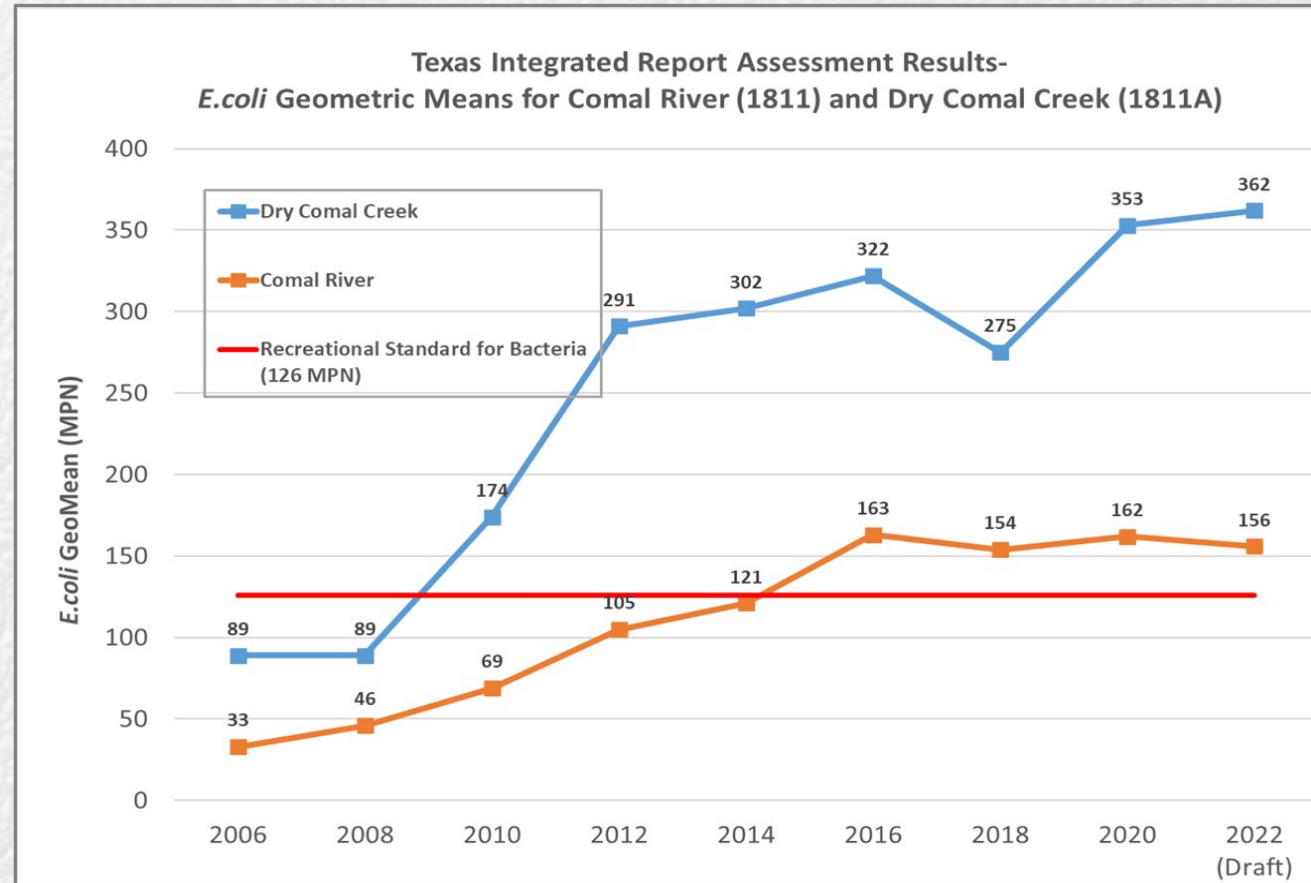


# Water Quality Concerns

**Dry Comal Creek:** initially placed on the 303(d) list for bacteria in 2010.

**Comal River:** initially placed on the 303(d) list for bacteria in 2016.

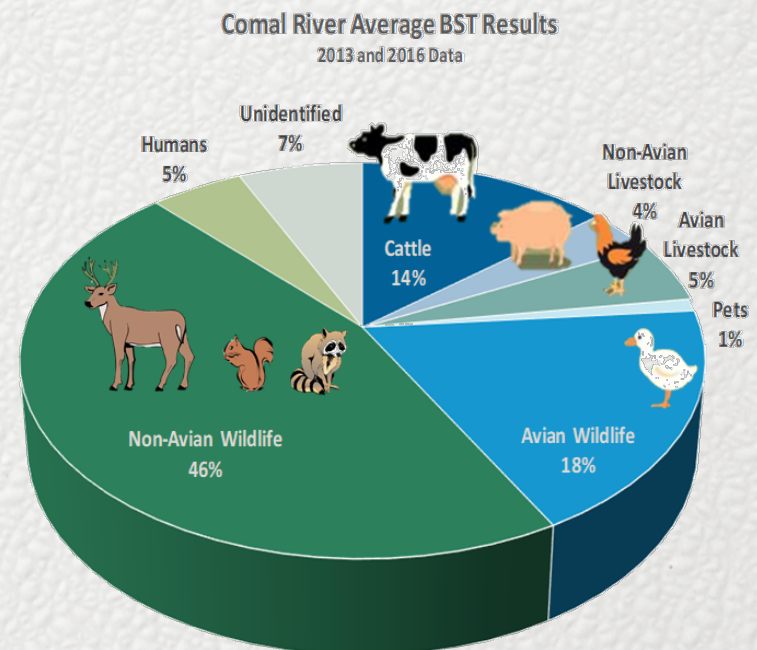
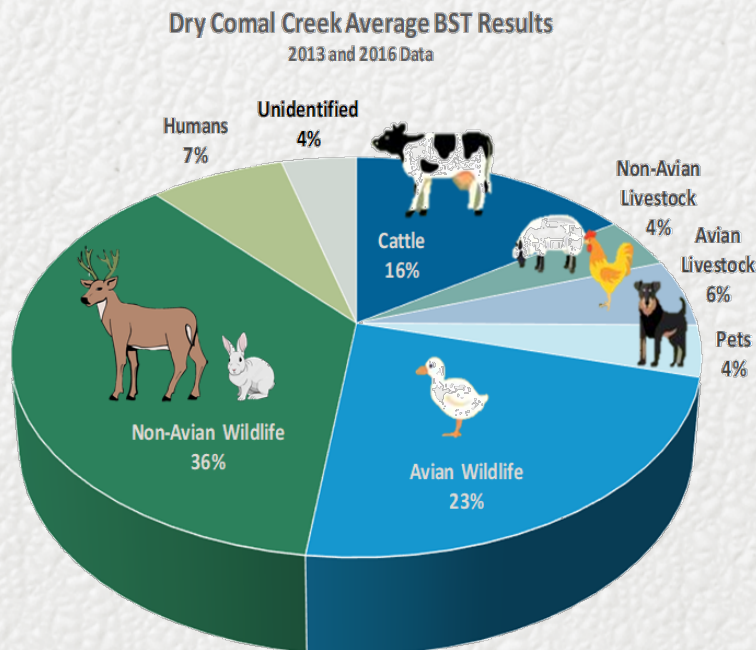
**Note:** Each data point represents the GeoMean of approx. 84 samples. For example, the 2020 assessment data points include 84 samples collected 2011-2018.





# Water Quality Concerns

- Bacteria Source Tracking (BST) analysis was conducted in 2013 & 2016 by Texas A&M lab to identify sources of bacteria in creek/ river
- Approx. 60% of the bacteria found in Comal River & Dry Comal Creek from wildlife
- The Watershed Protection Plan (WPP) for the Dry Comal Creek and Comal River includes wildlife management measures to address bacteria loading. WPP accepted by TCEQ and EPA in September 2018. Funding also provided by TCEQ/ EPA to support WPP implementation.





# Previous Efforts





# Non-Native Waterfowl Mgmt.

Since early 2019:

- 203 non-native waterfowl have been trapped and removed from Landa Park
- 114 non-native waterfowl eggs have coated with vegetable oil





# Outreach and Education

## WPP Educational Video

- Production finalized in August 2020
- Video shown at two local movie theaters prior to each movie for 10 weeks in 2022
- Currently shown on New Braunfels local access channel, CoNB facilities with video screens, CoNB WPP website





# Outreach and Education

## Watershed Signage

- Developed watershed signage to be installed at 6 locations within the Dry Comal Creek and Comal River Watersheds
- Signage installed in Fall 2021





## WPP Educational Games


- To be tested and published Spring 2022
- Browser-based games that can be utilized in conjunction with any watershed programming
- Will be available on the CoNB WPP website





# Outreach and Education

## Jeopardy-style quiz game



SPRINGS, RIVERS, WATERSHED.  
OUR RESPONSIBILITY

Healthy Watersheds	Water Quality	Nonpoint Source Pollution	Protecting Wildlife
100	100	100	100
200	200	200	200
300	300	300	300
400	400	400	400
500	500	500	500
600	600	600	600

QUESTIONS REMAINING  
**0/10**

SCORE  
**0**

City of New Braunfels

**Two watersheds in  
New Braunfels are...**

**Comal Creek  
Comal River  
Watersheds**

**Upper and Lower  
San Antonio River  
Watersheds**

**Comal Creek and  
San Marcos River  
Watersheds**

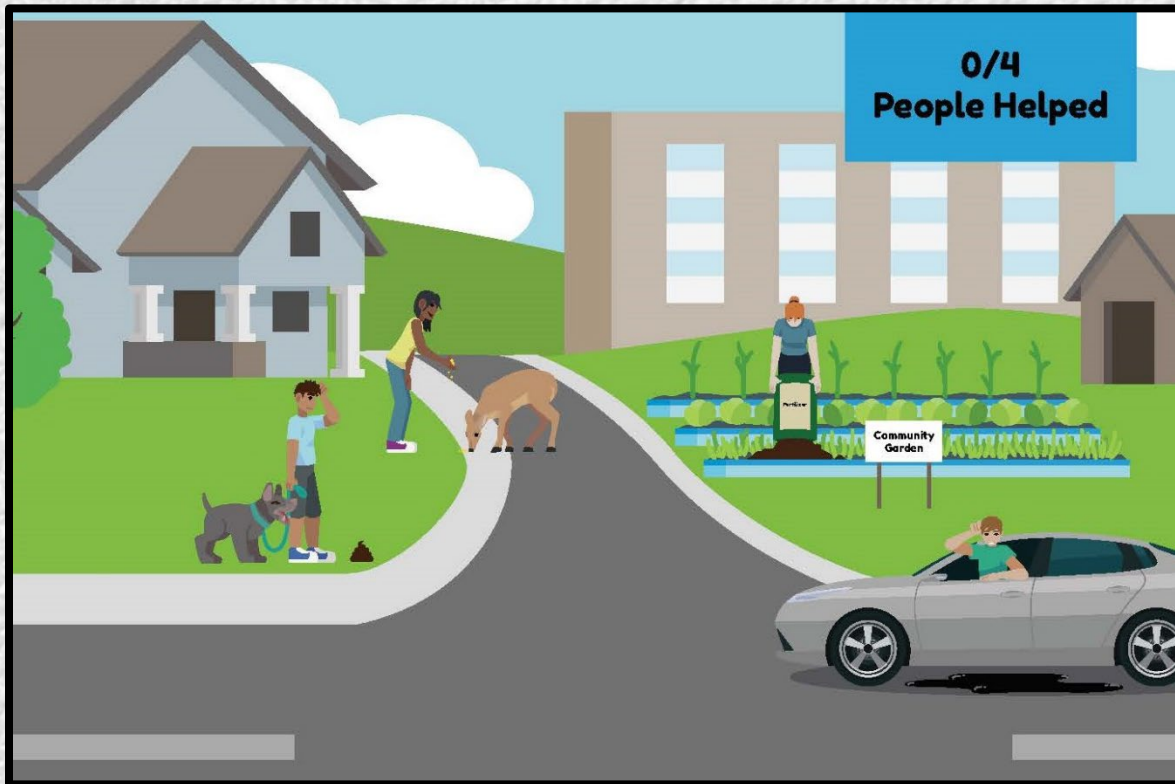
**Medina River and  
Navidad River  
Watersheds**

**SUBMIT**



# Outreach and Education

## Watershed Hero – Scenario evaluation game



**0/4 People Helped**

**Scenario:** Your friends feeding corn to deer. What do you do?

**Options:**

- ☐ Sit in your chair and watch. Your friend is taking care of the deer.
- ☐ Tell your friend that feeding deer so closely is unsafe. She should use a feeder and observe at a distance.
- ☐ Tell your friend that corn is not nutritious for deer and recommend she feed the deer natural foods like flowers and grass instead.
- ☐ Ask your friend to stop feeding the deer, and ask her to come with you to look for and photograph (from a distance) deer in their natural habitats.

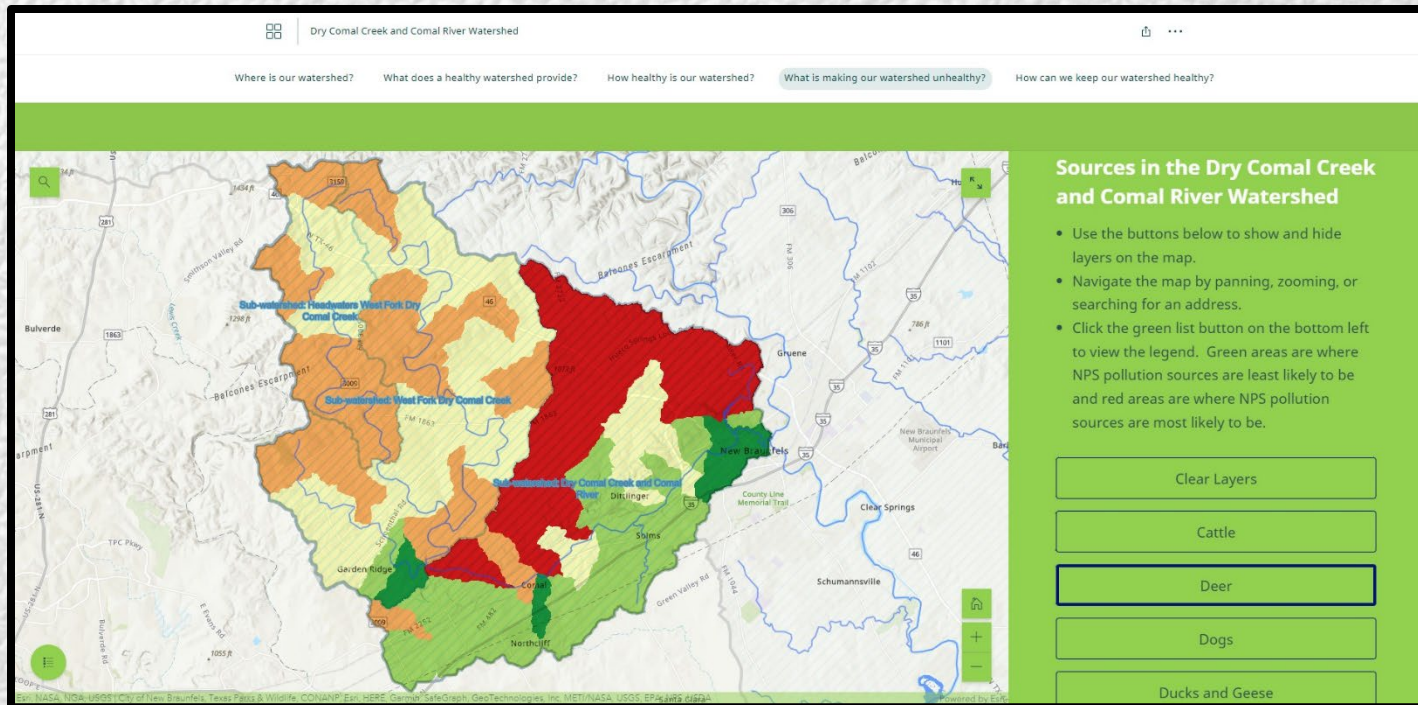
**SUBMIT**



# Outreach and Education

## Watershed Visualization Tool

- Production finalized Summer 2021
- Guides user through basic watershed education topics
- Map is currently available on the CoNB GIS Portal





## Headwaters at the Comal Watershed Education Program

- Watershed curriculum finalized in late 2020; watershed activities are integrated into the overall programming schedule
- Headwaters at the Comal hosted summer events and field trips in Fall 2021; planning to continue in 2022







## Hands-on Learning Activity

- Hands-on activity focuses on the lifecycle of bacteria and how bacteria levels are monitored in nature
- Classroom kits consist of a handbook for the activity, workbooks, and the supplies need for the bacterial culture growth experiment
- CoNB staff will provide kits to teachers interested in incorporating this activity into their curriculum


**What is *E. coli*?**




A rod-shaped bacterium found in the environment, food and our intestines



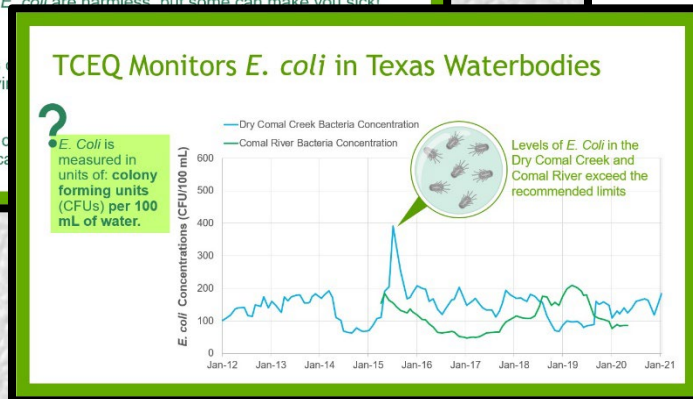
Most types of *E. coli* are harmless, but some can make you sick!



High numbers of bacteria and viruses



*E. coli* can be cultured and ideal indicator





## Wildlife Waste Removal

- CoNB has contracted with an animal waste removal service to pick up animal waste in Landa Park
- Waste removal service is performed twice per month
- Since May 2021, over 2020 lbs. of waste has been removed





## Stormwater Sampling

- Stormwater sampling program to begin in Summer 2021
- Four sampling events at 12 locations – 4 stormwater outfalls to the Comal River, 8 SW outfalls to Dry Comal Creek
- Data collected will be used to inform a report defining prime locations for installation of structural stormwater BMPs





# Next Steps...



- **CoNB awarded FY21 319(h) NPS grant funding through TCEQ to support continued WPP implementation**
- **New grant contract began September 1<sup>st</sup>, 2021**
  - **Continued outreach and education program**
  - **Structural BMP design, construction, and monitoring**
  - **Urban Wildlife Waste Reduction**
  - **Pet Waste Reduction**



# Watershed Events

- **Dos Rios Watershed Cleanup**
  - City-wide annual single-day volunteer event
  - Held in September or October
- **Adopt-a-Spot Program**







**Additional WPP Information:**

**[www.nbtexas.org/wpp](http://www.nbtexas.org/wpp)**





# Questions?

Phillip Quast  
Watershed Coordinator  
City of New Braunfels  
(830) 221-4651  
[pquast@nbtexas.org](mailto:pquast@nbtexas.org)