

Plum Creek Watershed Protection Plan 2021-2022 Updates

**Guadalupe River Basin
Clean Rivers Program Steering Committee Meeting**
April 28, 2022



Christina Lopez, PhD
Watershed Coordinator
Plum Creek Watershed Partnership

TEXAS STATE
Soil & Water
CONSERVATION BOARD

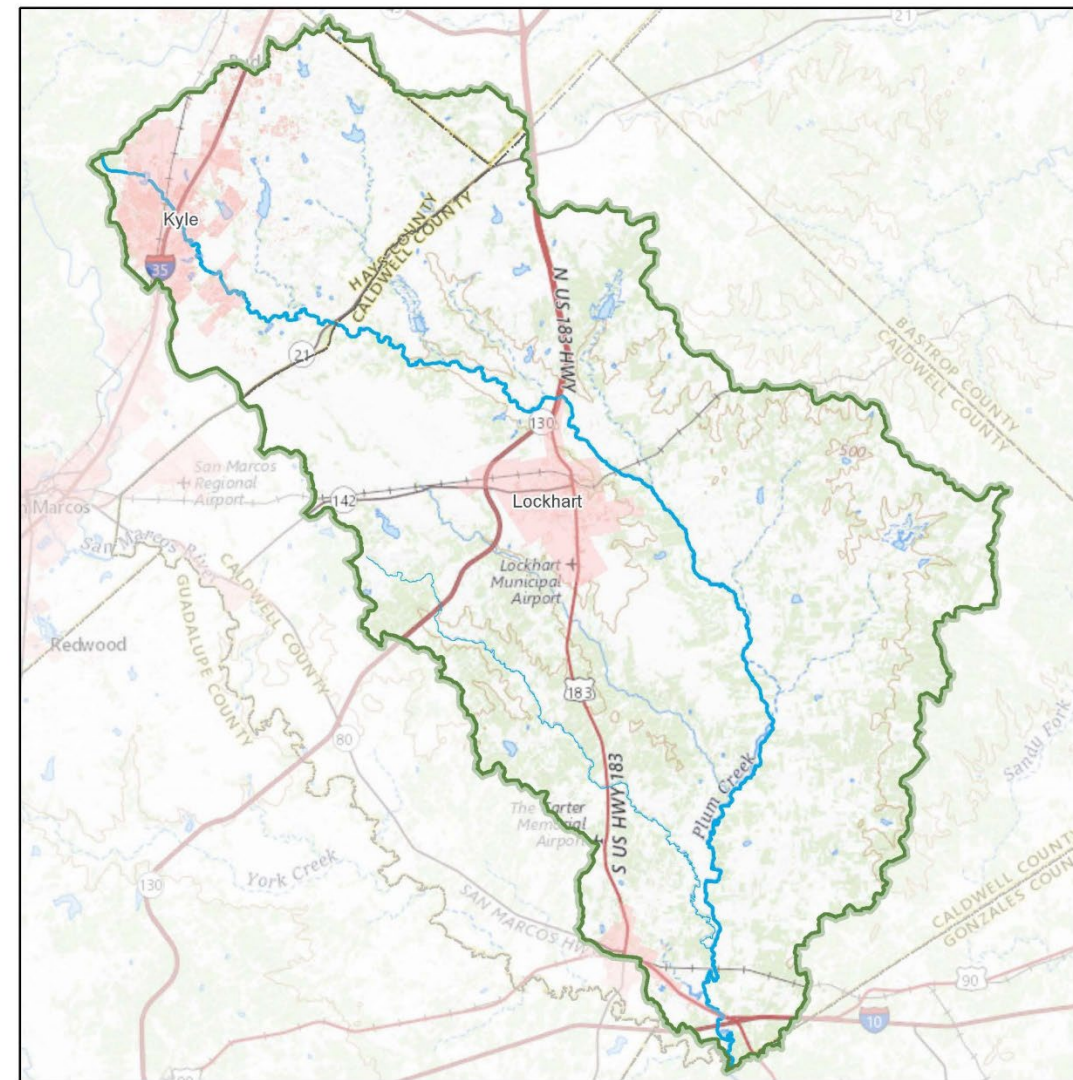
Plum Creek Watershed

The Watershed

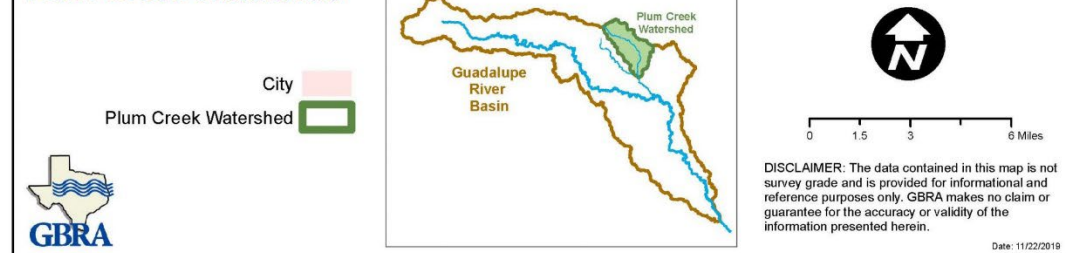
- Kyle-Lockhart-Luling
- 52 miles
- ~400 square miles
- Tributary to the San Marcos River

Problems in Plum Creek

- Impaired for *E. coli* bacteria (2004)
- Concerns for excessive nutrients and in-stream habitats



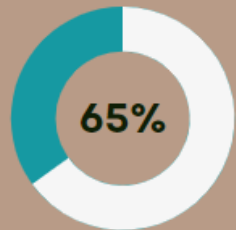
Plum Creek Watershed



Watershed Protection Plan – 2022 Update

Under review at the Texas Commission on Environmental Quality

Stakeholder Survey



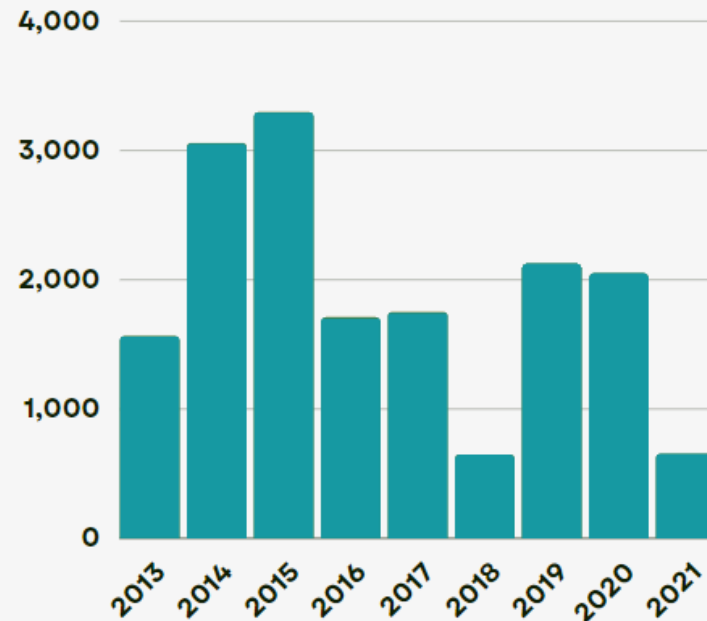
View urbanization as a threat to water quality

Want to see riparian education in watershed



FERAL HOG MANAGEMENT

16,776 HOGS REMOVED SINCE CENTRAL TEXAS FERAL HOG TASK FORCE BEGAN



Outreach & Engagement



- 1,243 Subscribers on Constant Contact
- 364 "Likes" on Facebook
- 114 "Followers" on Instagram
- 24 events



Plum Creek Stewards

New water quality monitoring group! Anyone can be trained to be a citizen scientist.



plumcreekwatershed.org

Watershed Protection Plan – 2022 Update

Water quality

Current impairments and concerns in Plum Creek as described in the 2020 Texas Integrated Report

Assessment Unit	Parameter	Status
1810_01 Confluence with San Marcos River	<i>E. coli</i> geometric mean	Nonsupport (4b)
	Nitrate Nitrogen	Concern for screening level
	Total Phosphorus	Concern for screening level
	Fish Community	Concern for near non-attainment
	Aquatic Habitat	Concern for screening level
1810_02 From approximately 2.5 miles upstream of confluence with Clear Fork Plum Creek	Dissolved Oxygen 24 Hr. Average	Concern
	<i>E. coli</i> geometric mean	Nonsupport (4b)
	Nitrate Nitrogen	Concern for screening level
	Total Phosphorus	Concern for screening level
	Fish Community	Concern for near non-attainment
1810_03 From approximately 0.5 miles upstream of SH 21 to upper end of segment.	Aquatic Habitat	Concern for screening level
	<i>E. coli</i> geometric mean	Nonsupport (4b)
	Nitrate Nitrogen	Concern for screening level
	Total Phosphorus	Concern for screening level
	Ammonia Nitrogen	Concern for screening level
1810A_01 <i>Town Branch</i> Perennial stream in the City of Lockhart.	Impaired Macrobenthic Community	Concern for near non-attainment
	<i>E. coli</i> geometric mean	Concern for near non-attainment
	Nitrate Nitrogen	Concern for screening level
	Depressed Dissolved Oxygen Grab	Concern

Watershed Protection Plan – 2022 Update

Water quality

Three Main Stem Routine Monitoring Site Trends (2008 to June 2021)

Upstream 1. No trend in *E coli*. Decreasing N and P Increasing Ammonia + Flow



2. No trend in *E coli*. Decreasing N and P Decreasing Ammonia + Flow

3. No trend in *E coli*. +N and – P Decreasing Ammonia + Flow

Downstream

Watershed Protection Plan – 2022 Update

Water quality

Four Tributary Routine Monitoring Site Trends (2008 to June 2021)

1. West Fork	No trend in <i>E.coli</i> .	Decreasing N	No trend Ammonia	No trend flow
2. Clear Fork	Increasing <i>E.coli</i> .	Increasing N	No trend Ammonia	+ Flow
3. Elm Creek	<i>No trends</i>			
4. Brushy Creek	No trend in <i>E.coli</i> .	No trends	Decreasing Ammonia	+ Flow

Watershed Protection Plan – 2022 Update

Table 10. Descriptive statistics and M-K Results for routine tributaries (2008 to June 2021)

Site	Parameter	2008- Oct. '19 Mean	Reporting Period Mean	Difference	Kendall's τ^{12}	p value	Interpretation
20500 West Fork	<i>E. coli</i> ¹³	134.3	65.96	-68.38	0.0573	0.3463	No trend
	Dissolved Oxygen	5.80	2.31	-3.49	0.0205	0.7359	No trend
	Nitrate-N	0.27	0.07	-0.20	-0.256	<0.0001***	Decreasing
	Total Phosphorus	0.41	0.14	-0.27	-0.0727	0.2319	No trend
	Ammonia-N	0.28	<0.10	0.00	-0.0904	0.3728	No trend
	Flow	1.3	0	-1.3	0.0869	0.28203	No trend
12556 Clear Fork	<i>E. coli</i>	248.8	244.9	-4.3	0.1274	0.0179*	Increasing
	Dissolved Oxygen	7.78	7.96	0.18	-0.0173	0.7476	No trend
	Nitrate-N	1.64	2.09	0.41	0.3375	<0.0001***	Increasing
	Total Phosphorus	0.11	0.11	0	-0.0768	0.1782	No trend
	Ammonia-N	0.22	0.13	-0.09	0.0909	0.2501	No trend
	Flow	7.71	1.76	-5.95	0.1200	0.0239*	Increasing

Programs

- Texas Stream Team, Plum Creek Stewards
- Central Texas Feral Hog Task Force
 - Bounty Claims – monthly through July
 - Caldwell County – 3rd Thursdays
 - Hays County – 2nd Mondays and 3rd Fridays
 - Workshops (TBA)
 - Damage Surveys (ongoing)

Central Texas Feral Hog Task Force - Feral Hog Damage and Control Survey

Please complete the following for property owned or managed. Information provided will be used exclusively for data collection and analysis. Personal information will not be distributed by the Central Texas Feral Hog Task Force without your express consent.



TEXAS STREAM TEAM

CORE ENVIRONMENTAL MONITORING FORM

General Information

Sample Date*

MM/DD/YYYY

Sample Time (military)*

HHMM

For example: 1455

Site ID and Description*

Search by ID# or description; select "10001 - Training" if using the form for training purposes

Collaborations

- Dig Together + Keep Lockhart Beautiful
 - Tool Rental and Community Beautifications
- HEDGE
- Perry Homes Foundation



Events: Cleanups

Keep Lockhart Beautiful — Fall Clean & Green — Lockhart Parks

November 6, 2021

- 120 volunteers
- 1,000+ lbs of trash
- 100 Trees

Scenic Texas



Events: Cleanups

Great Texas River Cleanup — Upper Plum Creek — Kyle Plum Creek Trail March 5, 2022

- 83 volunteers
- 170 lbs of recycling
- 2,840 lbs of trash
- 1 tire







Events: Workshops

Texas Well Owner Network — Well Educated — The Luling Foundation

March 4, 2022

- 27 attendees & Facebook Livestream (100+ views)
- Private water well basics, onsite wastewater treatment, & water quality testing
- Presentations by PCWP and Plum Creek Conservation District

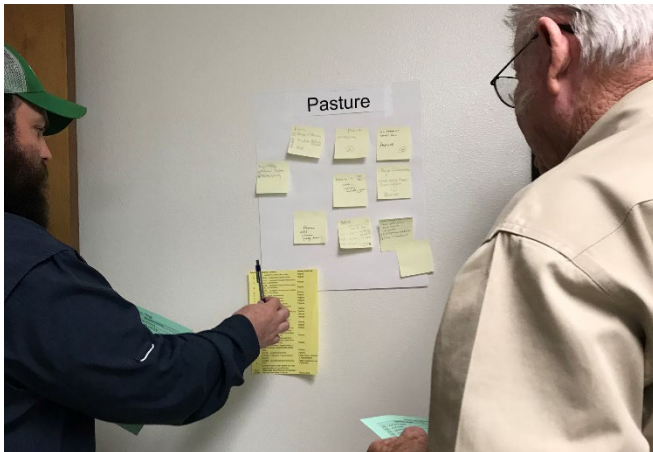


Events: Workshops

Local Work Group — Caldwell-Travis SWCD — Lockhart

April 7, 2022

- Natural Resource Conservation Service (NRCS)
- Online survey for natural resource concerns workshop/listening session
- Identified **soil health** as a major concern



Events: Watershed Partnership

**Steering Committee Meeting – Lockhart State Park
December 9, 2022**



- **City of Kyle - wastewater treatment facility upgrades and expansion**
- **Introduction to the Caldwell County Environmental Enforcement Unit**
- **New members added: Dr. San Hwang and the Guadalupe-Blanco River Trust**

Events: Watershed Partnership

Steering Committee Meeting — Kyle Fire Department Station 1

March 24, 2022



- **BVRT Water Resources - Plum Creek Utility**
- **Caldwell-Travis SWC District Technician - Water Quality Management Plans**
- **Priority Watershed Protection Planning**

Steering Committee Members Moving WPP Forward

- Priority ranking
 - Urban Stormwater Management
 - Wastewater Management
 - Agricultural Management
 - Wildlife Management
 - Outreach and Education
- Next up: defining new goals

Watershed Protection Priority Planning

Please rate the following management measure's level of importance for the near- and long-term for the Plum Creek Watershed Protection Plan.

Urban Stormwater Management

Capturing runoff: Pervious cover, rainwater harvesting, etc.

Near term (1-5 years)

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

Not Important at all Very Important

Long term (5-10 years)

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

Not Important at all Very Important

Events: Outreach and Engagement

Sip and Stroll – Downtown Lockhart

April 2, 2022



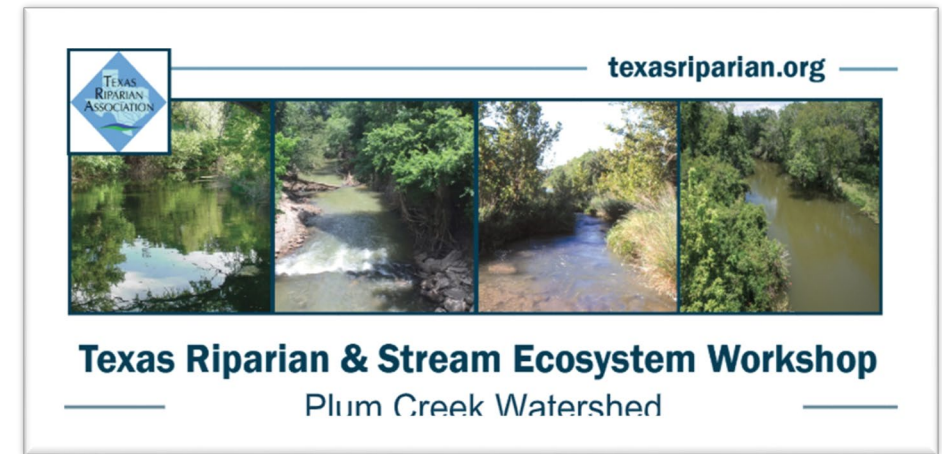
Events: Outreach and Engagement

Earth Day Celebration — Upper Plum Creek — Kyle Public Library
April 23, 2022



Upcoming Events

- ✓ **Caldwell County Community Cleanups**
Summer series
- ✓ **Texas Riparian & Stream Ecosystem Training**
Lockhart State Park, May 12, 2022
- ✓ **Caldwell County Environmental Connections**
Lockhart State Park, May 6, 2022
- ✓ **Lone Star Healthy Streams**
Seguin, June 1, 2022



THANK YOU!

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TEXAS STATE
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Funding for the development and support of the Plum Creek Watershed Protection Plan is through a Clean Water Act grant provided by the Texas State Soil and Water Conservation Board and U.S. Environmental Protection Agency.

