Wimberley Valley Watershed Association Clean Rivers Program Overview



LAND. WATER. CONNECTION.

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- The Wimberley Valley Watershed Association (WVWA) began funding the program with help from the City of Wimberley in 2003
- Contributes monitoring data collected under the GBRA CRP QAPP from the Blanco River and Cypress Creek watersheds
- Meadows Center staff (trained by GBRA and listed in the QAPP) collects data
- GBRA laboratory analyzes data/samples and submits data to TCEQ Surface Water Quality Monitoring Information System (SWQMIS)

Connected By Water



Managing water resources is of paramount importance for the continued health and welfare of the local citizens and economy



Purpose

- Proactive in protecting the Wimberley area water resources
- Detect and describe spatial and temporal changes
- Determine impacts of point and nonpoint sources
- Assess compliance with established water quality standards for
- Cypress Creek and the Blanco River



Water is the lifeblood of the Wimberley Valley

Jacob's Well Spring



- Flows from Jacob's Well fell below 1 cfs during the summer of 2018
- Recent WVWA CRP monitoring data indicate that surface water quality is directly affected by low spring flows (depressed DO)

Rain!

Discharge, cubic feet per second

0.10

Sep

82

2018

Sep

83

2018

Most recent instantaneous value: 86.5 09-09-2018 13:30 CDT



Sep

85

2018

---- Provisional Data Subject to Revision

Sep

86

2018

Sep

87

2018

Sep

88

2918

Sep 89

2618

🛆 Median daily statistic (13 years) — Discharge

Sep

84

2018

JWS Monthly Flow



Relevance of Pleasant Valley Spring in relation to regional spring flow from the Middle Trinity Aquifer (headwaters of the "lower Blanco River")





Prioritized Goals for Spring Flow and Ground Water Quality Protection

- Preserving Cypress Creek headwaters and flow regime at or above WPP target of 6 cfs based on the DO criteria
 - This strategy is an attempt at preserving (or recovering) the hydrologic regime for the health of the creek and its designated uses
 - Additionally, for managing potential nutrient loading, maintaining flow conditions at or above a target flow level under a variety of conditions is a nutrient pollutant management strategy under the build-out development scenario. Thus, maintaining flow is a valued surface water target.



*The Cypress Creek WPP Implementation Water Quality Monitoring & Data Acquisition QAPP was approved by TCEQ on November 26, 2018 12677 - Cypress Creek @ Jacob's Well Spring (*WVWA CRP Since 2003*) 22109 - Cypress Creek @ Camp Young Judea (*New TCEQ NPS Program Site*) 22110 - Cypress Creek @ Woodcreek Drive (*New TCEQ NPS Program Site*) 12676 - Cypress Creek @ Ranch Road 12 (*WVWA CRP Since 2002*) 12675 - Cypress Creek @ Blue Hole (*WVWA CRP Since 2005*) 12673 - Cypress Creek @ Blanco River Confluence (*WVWA CRP Since 2003*)

CRP Stations that will still be monitored by WVWA under the GBRA QAPP



GBRA staff will continue to monitor the Cypress Creek @ RR12 Downtown CRP Station



View WVWA CRP DATA Online

	Guadalupe-Blanco River Authority						
							Email Subscriptions Pay My Bill
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Hays County Monitoring Sites

Putting your cursor over the stream site number on the map below will generate a picture of the site (if available). Clicking on the site number will take you down the page to a table of sites with locations, parameters and frequency of analysis. Below the table is a legend defining the abbreviations used in the table.



Clean Rivers Program: Overview Water Quality Data Collection Special Studies Public Participation Monitoring Sites: Maps and Data for Monitoring Sites Blanco Caldwell Calhoun Comal DeWitt Goliad Gonzales Guadalupe Hays Jackson Kendall Kerr Victoria Water Quality: Laboratory Services Plum Creek Watershed Geronimo Creek Watershed

http://www.cypresscreekproject.net/main-water-quality



16. Blanco River at CR 174 (CRP/TST)

This site is located at a county road low water crossing. It is in a valley on the south bank of the Blanco River. There is some farmland and ranchland in this valley. On the north bank are several houses. Both banks are lined with cypress trees.

UNDERSTANDING THE DATA

This site is also monitored by Texas Stream Team. Please visit their database for info on this site's parameters.

TST DATABASE FOR THIS SITE

LAST FOUR QUARTERS

	CRP Data: Blanco River at CR 174					
Date	Flow (CFS)	DO (mg/L)	E. coli (MPN/100 mL)	Days Since Rain		
01/11/17	80	9.8	100	37		
03/28/17	148	9.1	26	17		
06/01/17	76	8.9	26	1		
11/02/17	46	8.6	73	2		

SEVEN YEAR GEOMEAN (03/18/10-11/02/17)

CRP Data: Blanco River at CR 174						
Flow (CFS)	DO (mg/L)	E. coli (MPN/100 mL)				
56	9.9	37				

https://www80.tceq.texas.gov/SwqmisPublic/index.htm



What has been learned from WVWA CRP Data?

For Thought - Drivers of Water Quality

- Declining groundwater levels lower flows result in worsening water quality
- Impacts of drought lower flows, increased temperatures negatively affect dissolved oxygen and bacteria
- Growth, development increased impervious cover/increased stormwater flows; nonpoint source pollution from homes, cars, businesses; changes in wildlife habitat/patterns; aging infrastructure





Trends in Bacteria – Downtown and Blanco Confluence

- E. Coli values downtown are consistently higher than those upstream
- Data trends show a steady increase in bacteria downtown and at the confluence with the Blanco
- Bacteria returns to lower levels downstream of the confluence and are low above Cypress Creek
- Sure does look nice, but WVWA CRP water quality data has shown elevated levels of bacteria even during normal base-flow conditions
- Jacob's Well provides the majority of flow to Cypress Creek

Questions?



THANK YOU

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THE MEADOWS CENTER FOR WATER AND THE ENVIRONMENT

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