

# Annual Environmental Flows Achievement Report

Submitted by: Brazos River Authority

Submitted to: Texas Commission on Environmental Quality

Date: April 23, 2025

Reporting Period: November 1, 2023, through October 31, 2024

The Brazos River Authority System Operation Permit was approved by the Texas Commission on Environmental Quality (TCEQ) and was issued November 30, 2016. The conformed Water Management Plan (WMP) was subsequently approved on April 2, 2018. The Annual Environmental Flows Achievement Report is required in Support of the WMP.

This report summarizes environmental flow achievement for the reporting period from November 2023 through October 2024. If environmental flow conditions were not achieved, the report identifies if operations (i.e. water storage and/or diversion) under the System Operation Permit WMP caused the non-achievement, and if so, how further non-achievement will be prevented. Herein *WMP water use* refers to WMP water storage and/or diversion that is accounted against the System Operation Permit.

There was 22,722.1 ac-ft of WMP run-of-river diversion and 0.0 ac-ft of WMP lakeside diversions and storage for a total of 22,722.1 ac-ft of water use under the System Operation Permit Water Management Plan (WMP) during this period. Table 1 is a summary of all WMP measurement points and if WMP water use impacted achievement of HFP, baseflow or subsistence environmental flow conditions during the reporting period.

Table 1. WMP Measurement Point Summary.

Measurement Point	Did WMP Water Use Impact HFP Achievement?	Did WMP Water Use Impact Baseflow Achievement?	Did WMP Water Use Impact Subsistence Achievement?
USGS 08088000 Brazos River near South Bend	No	No	No
USGS 08089000 Brazos River near Palo Pinto	No	No	No
USGS 08089100 Brazos River near Glen Rose	No	No	No
USGS 08089500 Brazos River near Waco	No	No	No
USGS 08100500 Leon River near Gatesville	No	No	No
USGS 08104500 Little River near Little River	No	No	No
USGS 08106500 Little River near Cameron	No	No	No
USGS 08108700 Brazos River at SH21 near Bryan	No	No	No
USGS 08110500 Navasota River near Easterly	No	No	No
USGS 08111500 Brazos River near Hempstead	No	No	No
USGS 08114000 Brazos River near Richmond	No	No	No
USGS 08116650 Brazos River near Rosharon	No	No	No

## Measurement Points' Hydrologic Condition, Baseflow, & Subsistence

Table 2 lists each measurement point's seasonal hydrologic condition, total number of days per season that baseflow conditions were not met, and the total number of days subsistence conditions were not met.

Table 2. WMP Measurement points' hydrologic conditions, baseflow and subsistence days not met.

Measurement Point	Season	Hydrologic Condition	Total Number of Days Baseflow not Met	Total Number of Days Subsistence not Met	Did water storage or diversion under the WMP occur in applicable reach on any days not meeting criteria?
USGS 08088000 Brazos River near South Bend	Winter	Dry	0	0	No
	Spring	Average	0	0	No
	Summer	Average	69	0	No
USGS 08089000 Brazos River near Palo Pinto	Winter	Dry	0	0	No
	Spring	Average	0	0	No
	Summer	Average	13	0	No
USGS 08089100 Brazos River near Glen Rose	Winter	Dry	0	0	No
	Spring	Average	14	1	No
	Summer	Average	113	29	No
USGS 08089500 Brazos River near Waco	Winter	Dry	0	0	No
	Spring	Average	0	0	No
	Summer	Average	79	0	No
USGS 08100500 Leon River near Gatesville	Winter	Dry	0	0	No
	Spring	Average	0	0	No
	Summer	Average	23	0	No
USGS 08104500 Little River near Little River	Winter	Dry	0	0	No
	Spring	Average	36	0	No
	Summer	Average	74	0	No
USGS 08106500 Little River near Cameron	Winter	Dry	0	0	No
	Spring	Average	23	0	No
	Summer	Average	44	0	No
USGS 08108700 Brazos River at SH21 near Bryan	Winter	Dry	0	0	No
	Spring	Average	6	0	No
	Summer	Average	66	0	No
USGS 08110500 Navasota River near Easterly	Winter	Dry	0	0	No
	Spring	Average	0	0	No
	Summer	Average	0	0	No
USGS 08111500 Brazos River near Hempstead	Winter	Dry	0	0	No
	Spring	Average	5	0	No
	Summer	Average	76	1	No
USGS 08114000 Brazos River near Richmond	Winter	Dry	0	0	No
	Spring	Average	5	0	No
	Summer	Average	62	0	No
USGS 08116650 Brazos River near Rosharon	Winter	Dry	6	6	No
	Spring	Average	5	0	No
	Summer	Average	57	0	No

## Measurement Points' High Flow Pulses & WMP Water Use

Table 3 lists each WMP measurement point and information related to achievement of HFP environmental flow conditions. At some measurement points during select hydrologic conditions, no pulse is required (“no pulse req’d”).

Table 3. WMP Measurement Points' HFP events and WMP water use.

Measurement Point	Season	Were SB3 HFP Standards met?	During HFP did WMP water use occur at a rate greater than diversion rate trigger levels? <sup>1</sup>	Did WMP water use occur during HFP after all HFP criteria were met?	Total WMP water storage or diversion within applicable reaches during season (acre-ft)
USGS 08088000 Brazos River near South Bend	Winter	No pulse req'd	No	No	0.0
	Spring	Yes	No	No	0.0
	Summer	No	No	No	0.0
USGS 08089000 Brazos River near Palo Pinto	Winter	No	No	No	278.7
	Spring	Yes	No	Yes	367.4
	Summer	No	No	No	809.4
USGS 08089100 Brazos River near Glen Rose	Winter	No	No	No	0.0
	Spring	Yes	No	Yes	31.0
	Summer	No	No	No	0.0
USGS 08089500 Brazos River near Waco	Winter	Yes	No	Yes	309.7
	Spring	Yes	No	Yes	500.1
	Summer	No	No	No	146.9
USGS 08100500 Leon River at Gatesville	Winter	No pulse req'd	No	No	0.0
	Spring	Yes	No	No	0.0
	Summer	Yes	No	No	0.0
USGS 08104500 Little River near Little River	Winter	Yes	No	No	0.0
	Spring	Yes	No	Yes	19.8
	Summer	No	No	No	46.2
USGS 08106500 Little River near Cameron	Winter	Yes	No	No	0.0
	Spring	Yes	No	No	0.0
	Summer	No	No	No	0.0
USGS 08108700 Brazos River at SH21 near Bryan	Winter	Yes	No	Yes	80.3
	Spring	Yes	No	No	11.5
	Summer	No	No	No	243.9
USGS 08110500 Navasota River near Easterly	Winter	Yes	No	Yes	147.6
	Spring	Yes	No	Yes	422.2
	Summer	No pulse req'd	No	No	211.2
USGS 08111500 Brazos River near Hempstead	Winter	Yes	No	No	0.0
	Spring	Yes	No	No	23.4
	Summer	No	No	No	30.8
USGS 08114000 Brazos River near Richmond	Winter	Yes	No	Yes	782.3
	Spring	Yes	No	No	18,259.7
	Summer	Yes	No	Yes	0.0
USGS 08116650 Brazos River near Rosharon	Winter	Yes	No	No	0.0
	Spring	Yes	No	No	0.0
	Summer	Yes	No	No	0.0

<sup>1</sup> Diversion rate trigger levels apply only to run-of-river diversions

## **Brazos River near South Bend**

For the reporting period November 2023 through October 2024, data reported at USGS Gage 08088000 Brazos River near South Bend was used to determine if environmental flow conditions at the Brazos River near South Bend measurement point were achieved (see Table 2 and Table 3). The hydrologic condition for the winter season was dry and the spring and summer seasons were average. There was no WMP water storage or diversion during this period in any reaches associated with this applicable measurement point. No WMP water storage or diversion occurred at rates lower than diversion rate trigger levels during pulse events. WMP water use did not contribute to non-achievement of environmental flow conditions.

## **Brazos River near Palo Pinto**

For the reporting period November 2023 through October 2024, data reported at USGS Gage 08089000 Brazos River near Palo Pinto was used to determine if environmental flow conditions at the Brazos River near Palo Pinto measurement point were achieved (see Table 2 and Table 3). The hydrologic condition for the winter season was dry and the spring and summer seasons were average.

There was 1,455.5 ac-ft of run-of-river diversions made during this period in the Possum Kingdom dam to Palo Pinto gage reach and Palo Pinto gage to Dennis gage reach associated with this applicable measurement point. There was no WMP lakeside diversion nor storage during this period in any reach associated with this applicable measurement point. WMP run-of-river diversions occurred at rates lower than diversion rate trigger levels during pulse event.

WMP water use did not contribute to non-achievement of environmental flow conditions.

## **Brazos River near Glen Rose**

For the reporting period November 2023 through October 2024, data reported at USGS Gage 08089100 Brazos River near Glen Rose was used to determine if environmental flow conditions at the Brazos River near Glen Rose measurement point were achieved (see Table 2 and Table 3). The hydrologic condition for the winter season was dry and the spring and summer seasons were average.

There was 31.0 ac-ft of run-of-river diversions made during this period in the Glen Rose gage to Lake Whitney headwaters reach associated with this applicable measurement point. There was no WMP lakeside diversion nor storage during this period in any reach associated with this applicable measurement point. WMP run-of-river diversions occurred at rates lower than diversion rate trigger levels during pulse event.

WMP water use did not contribute to non-achievement of environmental flow conditions.

## **Brazos River near Waco**

For the reporting period November 2023 through October 2024, data reported at USGS Gage 08089500 Brazos River near Waco was used to determine if environmental flow conditions at the Brazos River near Waco measurement point were achieved (see Table 2 and Table 3). The hydrologic condition for the winter season was dry and the spring and summer seasons were average.

There was 956.7 ac-ft of run-of-river diversions made during this period in the Lake Whitney dam to Aquilla Creek/Brazos River confluence reach associated with this applicable measurement point. There was no WMP lakeside diversion nor storage during this period in any reach associated with this applicable measurement point. WMP run-of-river diversions occurred at rates lower than diversion rate trigger levels during pulse event.

WMP water use did not contribute to non-achievement of environmental flow conditions.

## **Leon River at Gatesville**

For the reporting period November 2023 through October 2024, data reported at USGS Gage 08100500 Leon River at Gatesville was used to determine if environmental flow conditions at the Leon River at Gatesville measurement point were achieved (see Table 2 and Table 3). The hydrologic condition for the winter season was dry and the spring and summer seasons were average. There was no WMP water storage or diversion during this period in any reaches associated with this applicable measurement point. No WMP water storage or diversion occurred at rates lower than diversion rate trigger levels during pulse events. WMP water use did not contribute to non-achievement of environmental flow conditions.

## **Little River near Little River**

For the reporting period November 2023 through October 2024, data reported at USGS Gage 08104500 Little River near Little River was used to determine if environmental flow conditions at the Little River near Little River measurement point were achieved (see Table 2 and Table 3). The hydrologic condition for the winter season was dry and the spring and summer seasons were average.

There was 66.0 ac-ft of run-of-river diversions made during this period in the Leon River near Belton gage to Little River gage reach associated with this applicable measurement point. There was no WMP lakeside diversion nor storage during this period in any reach associated with this applicable measurement point. WMP run-of-river diversions occurred at rates lower than diversion rate trigger levels during pulse event.

WMP water use did not contribute to non-achievement of environmental flow conditions.

## **Little River near Cameron**

For the reporting period November 2023 through October 2024, data reported at USGS Gage 08106500 Little River near Cameron was used to determine if environmental flow conditions at the Little River near Cameron measurement point were achieved (see Table 2 and Table 3). The hydrologic condition for the winter season was dry and the spring and summer seasons were average. There was no WMP water storage or diversion during this period in any reaches associated with this applicable measurement point. No WMP water storage or diversion occurred at rates lower than diversion rate trigger levels during pulse events. WMP water use did not contribute to non-achievement of environmental flow conditions.

## **Brazos River at SH121 near Bryan**

For the reporting period November 2023 through October 2024, data reported at USGS Gage 08108700 Brazos River at SH121 near Bryan was used to determine if environmental flow conditions at the Brazos River at SH121 near Bryan measurement point were achieved (see Table 2 and Table 3). The hydrologic condition for the winter season was dry and the spring and summer seasons were average.

There was 335.7 ac-ft of run-of-river diversions made during this period in the Highbank gage to Brazos/Little River confluence reach and the Brazos/Little River confluence to Bryan gage reach associated with this applicable measurement point. There was no WMP lakeside diversion nor storage during this period in any reach associated with this applicable measurement point. WMP run-of-river diversions occurred at rates lower than diversion rate trigger levels during pulse event.

WMP water use did not contribute to non-achievement of environmental flow conditions.

## **Navasota River near Easterly**

For the reporting period November 2023 through October 2024, data reported at USGS Gage 08110500 Navasota River near Easterly was used to determine if environmental flow conditions at the Navasota near Easterly measurement point were achieved (see Table 2 and Table 3). The hydrologic condition for the winter season was dry and the spring and summer seasons were average.

There was 781.0 ac-ft of run-of-river diversions made during this period in the Lake Limestone Dam to Easterly gage reach and the Easterly gage to Brazos/Navasota confluence reach associated with this applicable measurement point. There was no WMP lakeside diversion nor storage during this period in any reach associated with this applicable measurement point. WMP run-of-river diversions occurred at rates lower than diversion rate trigger levels during pulse event.

WMP water use did not contribute to non-achievement of environmental flow conditions.

### **Brazos River near Hempstead**

For the reporting period November 2023 through October 2024, data reported at USGS Gage 08111500 Brazos River near Hempstead was used to determine if environmental flow conditions at the Brazos River near Hempstead measurement point were achieved (see Table 2 and Table 3). The hydrologic condition for the winter season was dry and the spring and summer seasons were average.

There was 54.2 ac-ft of run-of-river diversions made during this period in the Bryan gage to Brazos/Yegua Creek confluence reach associated with this applicable measurement point. There was no WMP lakeside diversion nor storage during this period in any reach associated with this applicable measurement point. WMP run-of-river diversions occurred at rates lower than diversion rate trigger levels during pulse events.

WMP water use did not contribute to non-achievement of environmental flow conditions.

### **Brazos River near Richmond**

For the reporting period November 2023 through October 2024, data reported at USGS Gage 08114000 Brazos River near Richmond was used to determine if environmental flow conditions at the Brazos River near Richmond measurement point were achieved (see Table 2 and Table 3). The hydrologic condition for the winter season was dry and the spring and summer seasons were average.

There was 19,042.0 ac-ft of run-of-river diversions made during this period in the Hempstead gage to Richmond gage reach associated with this applicable measurement point. There was no WMP lakeside diversion nor storage during this period in any reach associated with this applicable measurement point. WMP run-of-river diversions occurred at rates lower than diversion rate trigger levels during pulse events.

WMP water use did not contribute to non-achievement of environmental flow conditions.

### **Brazos River near Rosharon**

For the reporting period November 2023 through October 2024, data reported at USGS Gage 08116650 Brazos River near Rosharon was used to determine if environmental flow conditions at the Brazos River near Rosharon measurement point were achieved (see Table 2 and Table 3). The hydrologic condition for the winter season was dry and the spring and summer seasons were average. There was no WMP water storage or diversion during this period in any reaches associated with this applicable measurement point. No WMP water storage or diversion occurred at rates lower than diversion rate trigger levels during pulse events. WMP water use did not contribute to non-achievement of environmental flow conditions.