

## Hays Trinity Groundwater Conservation District: Drought Contingency Plan



The Hays Trinity Groundwater Conservation District (HTGCD) is charged by Chapter 36 of the Water Code to "...provide for the conservation, preservation, protection, recharging, and prevention of waste of groundwater..." 36.0015(b)<sup>1</sup>

In order to prepare and act during drought, the HTGCD has developed the following Drought Contingency Plan and promulgated that plan into *Rule 13 Drought Management*, and *Rule 15.2 Drought Curtailment (in the Jacobs Well Groundwater Management Zone)*

Rule 13 (below) designates specific indicators, triggers, and curtailment measures that gauge drought severity and timely curtailment responses, and Rule 15.2 (below) is specifically for Jacobs Well Groundwater Management Zone specific rules.

HTGCD uses Pedernales and Blanco River streamflow as District-wide drought indicators because these rivers are recharge features of our aquifers. Aquifer recharge occurs relatively slowly, and streamflow indicates the current and future health of the Trinity Aquifer in the District -- and therefore determines what stage of drought we must observe.

Data shows healthy streamflow in the Pedernales River is above 31.6 cubic feet per second (cfs), and 28.5 cfs in the Blanco River. The District recommends conservative use of water when streamflow is healthy.

When streamflow drops below a drought trigger -- shown in the table below as "Conservation", "Alarm," "Critical," and "Emergency" -- a daily counter begins. If the counter for either drought indicator reaches 30 days, the District Board will declare the appropriate drought stage.

To move out of a drought stage, both drought indicators must flow 60 consecutive days above the current drought trigger in order to give aquifers time to recharge. The declaration of the District coming out of drought stage will go into effect on the next Board Meeting.

Streamflow is measured by the United States Geological Survey (USGS) gauges at the Blanco River in Wimberley and the Pedernales River in Johnson City. These gage readings are represented by the graphs above. The yellow triangles represent the median flow over an 80-year period and the blue line represents streamflow in cubic feet per second (cfs).

The District also references the Palmer Drought Severity Index as a possible drought trigger as detailed in the chart below.

### **Jacob's Well Groundwater Management Zone (GMZ) Drought Management**

In order to protect groundwater supplies in the 39 square mile Jacobs's Well GMZ, District Rule 15 designates cutback triggers based on Jacob's Well spring flow. When flows from Jacob's Well

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<sup>1</sup> [Chapter 36 Water Code](#)

average 6-cfs or less during any 10-day period, The District Board declares appropriate drought stage. Springflow is measured by the United States Geological Survey (USGS) gauge at Cypress Creek in Wimberley. General Drought Rules apply to the GMZ if and when springflow triggers are not met. District-wide Jacob's Well GMZ drought trigger specifics may be found below in Rule 15.2.

## **RULE 13. DROUGHT MANAGEMENT**

### **Section 13.1 Drought Conditions & Provisions**

**(13.1.1)** The District shall designate the various drought conditions and implement the applicable provisions of this rule upon determination that such implementation may be necessary for the conservation, preservation, protection and recharge of the groundwater within the District boundaries.

### **Section 13.2 Drought Triggers**

**(13.2.1)** The District's drought triggers are based upon the discharge flow rates provided by the USGS for the Pedernales River at Johnson City (USGS 08153500) and Blanco River at Wimberley (USGS 08171000). The District also references the Palmer Drought Severity Index as a possible drought trigger, in accordance with subsection 13.2.2 (C). To see the latest drought trigger indicators, District Drought Stage Chart, or Drought Stage History, visit the District's website.

**(13.2.2)** The General Manager shall report the current stage of the Palmer Drought Severity Index at every Board meeting, and the Board may take action to implement the next drought stage based on the drought triggers in Section 13.3.

**(13.2.3)** The General Manager shall declare any drought stage level changes when they occur and provide a written Order for the Board to approve and sign at the next available Board meeting. Once drought stage has been initiated, all permit holders shall be notified of current drought status and its effective date. Permit holders are required to reduce groundwater production as indicated on their individual Drought Production Cutback Chart.

### **Section 13.3 Drought Stages**

**(13.3.1)** District drought management consists of four drought stages. When streamflow drops below a drought trigger (shown in the table below), or the PDSI reaches the indicated level, a daily counter begins. If the counter for either of the drought indicators reaches 30 days, the General Manager will declare the appropriate drought stage. When streamflow increases above a drought trigger and the PDSI reaches the next less severe drought severity level or indicates no drought for the entirety of a period of 60 days, the General Manager will declare the lesser

drought stage.

Percent Curtailment	Drought Stage	PDSI level or Pedernales River flow rate	PDSI level or Blanco River flow rate
10%	Conservation	PDSI = -1.5 to -1.9; or at or below 59 cfs	PDSI = -1.5 to -1.9; or at or below 41 cfs
20%	Alarm	PDSI = -2 to -2.9; or at or below 31.6 cfs	PDSI = -2 to -2.9; or at or below 28.5 cfs
30%	Critical	PDSI = -3 to -4.9; or at or below 10.2 cfs	PDSI = -3 to -4.9; or at or below 14.5 cfs
40%	Emergency	PDSI = -5 or less; or at or below 2.23 cfs	PDSI = -5 or less; or at or below 9.28 cfs

**(13.3.2)** The curtailment goals represent reductions from the annual authorized withdrawal amount. The curtailment goal for each of the four drought stages:

- A. Stage 1: Conservation 10%
- B. Stage 2: Alarm 20%
- C. Stage 3: Critical 30%
- D. Stage 4: Emergency 40%

**(13.3.3)** The following additional restrictions apply during each indicated stage:

- A. During Stage 2 (Alarm), Stage 3 (Critical), or Stage 4 (Emergency) conditions, groundwater withdrawn for a non-exempt use may not be used to fill or refill ponds.
- B. During Stage 3 (Critical) or Stage 4 (Emergency) conditions, the District will not accept any application for a new operating permit or any amendment to increase production under an existing operating permit.
- C. During Stage 3 (Critical) or Stage 4 (Emergency) conditions, no new well may be constructed other than wells drilled to replace existing permitted wells or wells for exempt uses. The Board may grant a variance to this rule if an existing condition in the District imminently threatening the health, safety, or welfare of the public will be significantly lessened by a proposed new well.

**Section 13.4 User Drought Contingency and Water Conservation Plans**

**(13.4.1)** Operating permit holders shall file with the District an acceptable User Drought Contingency Plan and Water Conservation Plan, which shall be kept current so as to remain consistent with the District's:

- A. Management Plan;
- B. Drought Contingency Plan, including but not limited to drought stage target pumpage volume;
- C. Water Conservation Plan; and
- D. Rules.

**(13.4.2)** Permit holders who are found to be in non-compliance with District drought management rules, the User Drought Contingency Plan, the Water Conservation Plan or the Drought Production Cutback Chart, may be subject to penalties.

*Adopted August 9, 2001. Amended March 25, 2004; Effective March 29, 2004 by Board Order 102. Amended February 24, 2005; Effective March 9, 2005 by Board Order 107. Amended June 14, 2007; Effective June 14, 2007 by Board Order 140. Amended and Effective April 3, 2013 by Board Order 159. Amended December 17, 2014; Effective January 1, 2015 by Board Order 174. Amended November 18, 2015; Effective December 1, 2015 by Board Order 178. Amended December 20, 2017; Effective January 1, 2018 by Board Order 187. Amended October 6, 2022; Effective October 6, 2022 by Board Order 222. Amended January 12, 2023; Effective January 12, 2023 by Board Order 223. Amended and Effective November 2, 2023 by Board Order 224.*

#### **END OF RULE 13**

### **Section 15.2 Drought Curtailments**

**(15.2.1)** Drought curtailments are mandatory for non-exempt use wells within the JWGMZ. The District will post the then current drought curtailment percentage applicable to that month on the first business day each month that a drought curtailment applies. The amount of groundwater authorized to be withdrawn during that month may not exceed the baseline amount as adjusted by the applicable drought curtailment amount. Monthly Baseline Production Amounts may be averaged only during contiguous months of a specific drought stage.

**(15.2.2)** Monthly Baseline Production Amount. Each Tier 2 or Tier 3 non-exempt use well permit shall include a Monthly Baseline Production Amount based on the average actual amount of groundwater produced and put to a beneficial use for each calendar month from January 2017 through December 2019. The Monthly Baseline Production Amount only applies during a curtailment period. A permittee may amend the Monthly Baseline Production Amount by filing a Monthly Baseline Production Amount adjustment request with the District. The Monthly Baseline Production Amount may be adjusted if the Board determines any of the following:

- 1) The total groundwater demand has increased through the addition of New Water Utility Service Connections;
- 2) The total groundwater demand has increased through expansion or growth; or
- 3) The permittee implemented water conservation measures that resulted in 10% or greater demand reduction. The Monthly Baseline Production Amount may be adjusted to reflect actual sustained demand reduction achieved.

**(15.2.3)** Monthly Baseline Production Amount for Permits Issued After 2016. Notwithstanding the Monthly Baseline Production Amount established pursuant to Rule 15.2.2, for permits issued after December 31, 2016, the Monthly Baseline Production Amount is the amount of groundwater production as authorized in the permit. After three calendar years of production, the District shall review the actual amount of groundwater produced and put to a beneficial use and consider modifying the Monthly Baseline Production Amount.

**(15.2.4)** Drought curtailment shall be based on a 10-Day running average of the USGS flow meter at Jacob’s Well.

A. During a curtailment period, groundwater production may not exceed the Monthly Baseline Production Amount adjusted by the following reduction percentages:

- 6 CFS or less ..... 10 Percent
- 5 CFS or less ..... 20 Percent
- 3 CFS or less ..... 30 Percent

B. During a drought stage, groundwater withdrawn for a non-exempt use may not be used to fill or refill ponds.

**(15.2.5)** Each permittee shall prepare a Drought Curtailment Implementation Plan detailing how the required production curtailments will be achieved. Drought Curtailment Implementation Plans must be submitted to the District as part of applications for operating permits with the District.

*Adopted March 5, 2020; Effective March 5, 2020 by Board Order 197. Amended April 1, 2021; Effective April 1, 2021 by Board Order No. 210. Amended October 6, 2022; Effective October 6, 2022 by Board Order 222. Amended and Effective November 2, 2023 by Board Order 224.*

**END OF RULE 15**