

Brackish Groundwater Production Zones: Guidance for requesting amendments

Groundwater Division

Brackish Resources Aquifer Characterization System (BRACS) Program

Introduction

In accordance with House Bill 30 of the 84th Texas Legislature (2015), the Texas Water Development Board (TWDB) is required to identify and designate brackish groundwater production zones in Texas with moderate to high availability and productivity of brackish groundwater that can be used to reduce the use of fresh water (codified as Texas Water Code § 16.060(b)(5)). As of 2022, the TWDB has identified and designated 31 local and regional [brackish groundwater production zones](#) that meet certain statutory criteria outlined in Texas Water Code § 16.060(b)(5).

In 2019, the 86th Texas Legislature passed Senate Bill 1041 that extended the deadline to complete zone designations from December 1, 2022 to December 1, 2032, and House Bill 722 that established a groundwater conservation district permitting framework for developing water supplies from TWDB-designated brackish groundwater production zones. The intent of House Bill 722 is to expedite the permitting process for brackish groundwater use by public water supplies and/ or electrical utilities and does not exclude the development of brackish groundwater resources outside of brackish groundwater production zones.

TWDB rules ([31 Texas Administrative Code § 356.70\(d\)](#)) allow the TWDB to initiate an amendment to a brackish groundwater production zone and also allow groundwater conservation districts to request an amendment to a brackish groundwater production zone. Rule § 356.70(d) states that amendment requests must “include a justification and documentation supporting the requested amendment.” This document provides guidance to groundwater conservation districts on the requirements and details of the amendment process.¹

How would a brackish groundwater production zone qualify for an amendment?

A designated brackish groundwater production zone may need to be amended if there is relevant new data or modeling information available that the TWDB did not have when originally making the designation. Such new data or information could potentially alter the parameters of the brackish groundwater production zone or introduce changes to the anticipated operational or environmental impacts of the brackish groundwater production.

¹ The guidance outlined in this document is separate from TWDB technical reviews of brackish groundwater production zone operating permits described in 31 TAC § 356.71.

Examples of these types of data or modeling results include:

- Newly available data, such as water levels, pump tests, or porosity from geophysical logs, that the TWDB did not have when determining production volumes
- Information on use of agricultural, domestic, or municipal wells not identified prior to the designation of the brackish groundwater production zone
- Additional data regarding injection or disposal wells permitted under Texas Water Code Chapter 27
- Data or information showing there are not sufficient hydrogeologic barriers² to prevent significant impacts to water availability or water quality in any area of the same or other aquifers, subdivisions of aquifers, or geologic strata that have an average total dissolved solids level of 1,000 milligrams per liter or less at the time of designation of the zone
- Improved models to estimate amounts of brackish groundwater that the zone can produce over a 30-year period and a 50-year period without causing a significant impact to water availability or water quality

What are the minimum requirements for a brackish groundwater production zone amendment?

A request for an amendment needs to demonstrate that data submitted will support an adjustment to the mapped brackish groundwater production zone. Zone amendments may include or reflect changes to the following:

- Modeled groundwater pumping volumes from the zone.
- Mapped, lateral and/or vertical extent of the brackish groundwater production zone.

Adjustments to the brackish groundwater production zone could result from changes such as variations in pumping within the aquifer or in aquifers that may be hydrologically connected, documented water-level changes, and/or changes in water quality. The amendment request submitted by the groundwater conservation district(s) should propose the scope of the zone adjustment and provide sufficient data to demonstrate the need for the adjustment.

² The term “sufficient hydrologic barrier” will be defined on an amendment-specific basis due to the wide spectrum of possible subsurface conditions, hydrologic dynamics (groundwater flow rates and directions), or environmental receptors.

When can a zone amendment be requested?

The TWDB will consider requests to amend brackish groundwater production zones beginning January 1, 2023. Amendment requests may be submitted at any time to BRACS-SUPPORT@twdb.texas.gov. Only requests received from a groundwater conservation district representative will be considered. The TWDB will have 60-days to determine if the amendment request is a “major” or “minor” amendment to a brackish groundwater production zone and work with the groundwater conservation district (s) to obtain complete data for the amendment request. An example of a minor amendment would be a relatively insignificant footprint change due to agricultural, domestic, or municipal wells not identified prior to the designation of the BGPZ (no modeling required). An example of a major amendment would be newly available data (water levels, pump tests, or porosity from geophysical logs) that would significantly change the modeled production volume (modeling required to quantify the impact to production).

After complete data is obtained, decisions regarding minor amendment requests will be delivered within six months, and decisions regarding major amendment requests will be delivered within two years. These timelines will allow TWDB staff to thoroughly analyze the amendment request while still completing their other job duties. One month before amendment decisions are made for both major and minor amendments, the TWDB will host a public meeting where the staff recommendations are provided to the public. Public feedback on the staff recommendations can be provided at the meeting or by email to Public-Comment@twdb.texas.gov. The staff recommendation and any public comments will be provided to the TWDB Executive Administrator so they may make their decision regarding the amendment. Notice of meetings will be delivered via email and be posted to the TWDB website. To be added to the notification list, please email BRACS-SUPPORT@twdb.texas.gov.

For future brackish groundwater production zone designation studies, groundwater conservation districts and any interested parties should be engaged as stakeholders and provide relevant information to the TWDB during stakeholder involvement opportunities. Stakeholder involvement during initial brackish groundwater production zone designation studies is integral to accurate zone delineations, which will limit the need for future amendments.

How to request a brackish groundwater production zone amendment

Amendment requests will be made by groundwater conservation districts. However, an individual, driller, or any other entity seeking an amendment to a brackish groundwater production zone may work with their local groundwater conservation district to initiate an amendment request.

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The following general criteria apply to a groundwater conservation district requesting an amendment:

- A groundwater conservation district may request an amendment, and may, at its discretion, accept or reject proposals from an individual, driller, or any other entity to prepare an amendment request.
- When requesting an amendment for a zone that extends across multiple groundwater conservation districts, all affected groundwater conservation districts must support the amendment, which shall be demonstrated with a resolution adopted by each affected district and submitted with the amendment request to the TWDB. The district making the amendment request must discuss the proposed amendment with the other affected districts in a public forum such as a groundwater management area meeting.
- A groundwater conservation district must submit an amendment request in writing (physical or electronic) that includes all the required documentation listed in this document to the TWDB Executive Administrator.

Required documentation

A groundwater conservation district or group of groundwater conservation districts requesting a zone amendment must submit all documentation listed below to the TWDB. If documentation from the below list is unavailable or not relevant to the requested amendment (e.g., MODFLOW models are unavailable, but the amendment request is due to finding fresh water and therefore may not be relevant to the proposed amendment), the request documentation will be considered complete. All documentation submitted to the TWDB with a request will become public information and non-confidential, subject to the requirements and exceptions of the Public Information Act. Required documentation and data includes the following:

- Zone amendment request in writing (physical or electronic).
- Justification statement describing the need for and benefit of the amendment request.
- Well information for wells involved in the amendment request.
 - Well drilled date
 - Well completed date
 - Purpose of well (who is using the water supply)
 - Location information, submitted as latitude, longitude, and total depth
 - State of Texas well report and/or well schematic or well construction information, including total depth and screened intervals
- Water quality analyses for wells involved in the amendment request.

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- Models: Please consult with TWDB BRACS staff for acceptable model code prior to submittal. Examples may include Kingdom, Groundwater Vistas, ArcGIS, or nonproprietary groundwater modeling such as MODFLOW and Phreeqc.
- Other available data including geophysical logs, driller logs, pump tests, and water level measurements.
- For amendment requests related to amendments that span multiple districts:
 - Written resolutions adopted by each of the affected groundwater conservation districts supporting the requested amendment
 - Evidence of the proposed zone amendment discussion with each affected district in a public forum (copies of meeting agenda, minutes, and/or notices)

Submittal of incomplete data and information relevant to the zone amendment may impede processing the request. For example, if the amendment request is based on existing brackish groundwater use for domestic, municipal, or agricultural purposes prior to zone designation, we require records that indicate

- Who is using the water to verify it is one of the three kinds of uses described in statute.
- Well construction information so we may assess if the well is producing water from strata affected by the brackish groundwater production zone.

The TWDB will work with the groundwater conservation district to obtain complete data. Once complete data is obtained, then the TWDB will analyze the request. If the submittal is determined to be incomplete, the district(s) will have three months from the date of the notification letter to submit the supplemental data and/or files needed to process the amendment request.

TWDB Review

Once TWDB staff has reviewed the amendment request, and determined that the submittal is complete and appropriate, the TWDB will have six months to evaluate a minor amendment request and two years to evaluate a major amendment request. The TWDB will host a public stakeholder feedback meeting with staff recommendations to the TWDB Executive Administrator one-month before the amendment decision is due. Public notice of this meeting will be provided by email and by posting to the TWDB website. The TWDB will notify the affected groundwater conservation district(s) of the amendment decision and will post the decision to the TWDB website within one month of the amendment decision.

Approval of amendments will not require a Board action. Brackish groundwater production zone amendments will be documented by the TWDB as addendums to original zone

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designation studies and will detail the justification, modifications, and new data associated with the amendment(s). Approved amendments will be posted to the TWDB website.

Statutes and Rules

[Texas Water Code § 16.060](#)

[31 Texas Administrative Code § 356.70](#)

For questions, contact:

Kristie, Laughlin, P.G., BRACS Manager

kristie.laughlin@twdb.texas.gov; 512-475-1748