

## **BILL ANALYSIS**

C.S.H.B. 30  
By: Larson  
Natural Resources  
Committee Report (Substituted)

### **BACKGROUND AND PURPOSE**

Interested parties note that brackish groundwater desalination is one of the water supply strategies that may be used to meet the state's water demands over the next several decades. Brackish groundwater desalination is the process of treating mostly inland water that contains a high level of total dissolved solids to a quality that can be used for drinking water and other uses. It has been reported that there are billions of acre-feet of brackish groundwater in Texas, and the interested parties contend that, although expensive to develop, brackish groundwater supplies could provide a reliable alternative to traditional water supplies. C.S.H.B. 30 seeks to encourage and facilitate the development of brackish groundwater.

### **CRIMINAL JUSTICE IMPACT**

It is the committee's opinion that this bill does not expressly create a criminal offense, increase the punishment for an existing criminal offense or category of offenses, or change the eligibility of a person for community supervision, parole, or mandatory supervision.

### **RULEMAKING AUTHORITY**

It is the committee's opinion that this bill does not expressly grant any additional rulemaking authority to a state officer, department, agency, or institution.

### **ANALYSIS**

C.S.H.B. 30 amends the Water Code to require the regional water plan that a regional water planning group is required to submit to the Texas Water Development Board (TWDB) to include consideration of the opportunities for and the benefits of developing large-scale desalination facilities for seawater or brackish groundwater that serve local or regional identified and designated brackish groundwater production zones.

C.S.H.B. 30 provides for the study and research of brackish groundwater desalination in Texas as an alternative to the study and research of seawater desalination in Texas in statutory provisions relating to desalination studies and research by the TWDB. The bill requires the TWDB's biennial progress report on the implementation of desalination activities in Texas to include identification and designation of local or regional brackish groundwater production zones in areas of Texas with moderate to high availability and productivity of brackish groundwater that can be used to reduce the use of fresh groundwater; that are separated by hydrogeologic barriers sufficient 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 zones; and that are not located in certain areas. The bill specifies such areas as an area of the Edwards Aquifer subject to the jurisdiction of the Edwards Aquifer Authority; an area in the boundaries of the Barton Springs-Edwards Aquifer Conservation District, the Harris-Galveston Subsidence District, or the Fort Bend Subsidence District; an area in an aquifer, subdivision of an aquifer, or geologic stratum that has an average total dissolved solids level of more than 1,000

milligrams per liter and is serving as a significant source of water supply for municipal, domestic, or agricultural purposes at the time of designation of the zones; or an area of a geologic stratum that is designated or used for wastewater injection through the use of injection wells or disposal wells permitted under the Injection Well Act.

C.S.H.B. 30 requires the TWDB to work together with groundwater conservation districts and stakeholders and consider the Brackish Groundwater Manual for Texas Regional Water Planning Groups, any updates to the manual, and other relevant scientific data or findings when identifying and designating brackish groundwater production zones. The bill requires the TWDB, in designating a brackish groundwater production zone, to determine the amount of brackish groundwater that the zone is capable of producing over a 30-year period and a 50-year period without causing a significant impact to applicable water availability or water quality and include in the designation description the amounts of brackish groundwater that the zone is capable of producing during such periods and recommendations regarding reasonable monitoring to observe the effects of brackish groundwater production within the zone.

C.S.H.B. 30 requires the TWDB to include in the biennial progress report on the implementation of desalination activities that is due not later than December 1, 2016, an identification and designation of brackish groundwater production zones for the portion of the Carrizo-Wilcox Aquifer located between the Colorado and Rio Grande Rivers, the Gulf Coast Aquifer and sediments bordering that aquifer, the Blaine Aquifer, and the Rustler Aquifer. The bill requires the TWDB, not later than December 1, 2022, to identify and designate brackish groundwater production zones for the other areas of Texas.

#### **EFFECTIVE DATE**

On passage, or, if the bill does not receive the necessary vote, September 1, 2015.

#### **COMPARISON OF ORIGINAL AND SUBSTITUTE**

While C.S.H.B. 30 may differ from the original in minor or nonsubstantive ways, the following comparison is organized and formatted in a manner that indicates the substantial differences between the introduced and committee substitute versions of the bill.

##### INTRODUCED

No equivalent provision.

##### HOUSE COMMITTEE SUBSTITUTE

SECTION 1. (a) With this state facing an ongoing drought, continuing population growth, and the need to remain economically competitive, this state must secure and develop plentiful and cost-effective water supplies to meet the ever-increasing demand for water.

(b) Brackish groundwater is a potential new source of water for municipal, industrial, and other purposes. This state has an estimated 880 trillion gallons of brackish groundwater, much of which is untapped. For many years this water was considered largely useless for most purposes, but advances in technology and pressures on other supplies have revealed that brackish groundwater is in fact a vital resource. In addition to providing potentially vast new supplies, the development of brackish

groundwater can reduce pressures on the use of fresh groundwater.

(c) Many in the oil and gas industry in this state have made significant strides to replace the use of fresh groundwater in their operations with brackish groundwater. This is a positive trend, and this Act is not intended to discourage the continued or expanded use of brackish groundwater for oil and gas development or to establish regulatory barriers or permitting requirements for the use of brackish groundwater for that purpose.

(d) The purpose of this Act is to provide meaningful incentives for the development of brackish groundwater in areas where that development would have a minimal impact on existing fresh groundwater use, while respecting private property rights in groundwater and continuing to encourage the use of brackish groundwater for purposes other than human consumption.

SECTION 1. Section 16.053(e), Water Code, is amended to read as follows:

(e) Each regional water planning group shall submit to the development board a regional water plan that:

(1) is consistent with the guidance principles for the state water plan adopted by the development board under Section 16.051(d);

(2) provides information based on data provided or approved by the development board in a format consistent with the guidelines provided by the development board under Subsection (d);

(2-a) is consistent with the desired future conditions adopted under Section 36.108 for the relevant aquifers located in the regional water planning area as of the date the board most recently adopted a state water plan under Section 16.051 or, at the option of the regional water planning group, established subsequent to the adoption of the most recent plan;

(3) identifies:

(A) each source of water supply in the regional water planning area, including information supplied by the executive administrator on the amount of modeled available groundwater in accordance with the guidelines provided by the development board under Subsections (d) and (f);

SECTION 2. Section 16.053(e), Water Code, is amended to read as follows:

(e) Each regional water planning group shall submit to the development board a regional water plan that:

(1) is consistent with the guidance principles for the state water plan adopted by the development board under Section 16.051(d);

(2) provides information based on data provided or approved by the development board in a format consistent with the guidelines provided by the development board under Subsection (d);

(2-a) is consistent with the desired future conditions adopted under Section 36.108 for the relevant aquifers located in the regional water planning area as of the date the board most recently adopted a state water plan under Section 16.051 or, at the option of the regional water planning group, established subsequent to the adoption of the most recent plan;

(3) identifies:

(A) each source of water supply in the regional water planning area, including information supplied by the executive administrator on the amount of modeled available groundwater in accordance with the guidelines provided by the development board under Subsections (d) and (f);

(B) factors specific to each source of water supply to be considered in determining whether to initiate a drought response;

(C) actions to be taken as part of the response; and

(D) existing major water infrastructure facilities that may be used for interconnections in the event of an emergency shortage of water;

(4) has specific provisions for water management strategies to be used during a drought of record;

(5) includes but is not limited to consideration of the following:

(A) any existing water or drought planning efforts addressing all or a portion of the region;

(B) approved groundwater conservation district management plans and other plans submitted under Section 16.054;

(C) all potentially feasible water management strategies, including but not limited to improved conservation, reuse, and management of existing water supplies, conjunctive use, acquisition of available existing water supplies, and development of new water supplies;

(D) protection of existing water rights in the region;

(E) opportunities for and the benefits of developing regional water supply facilities or providing regional management of water supply facilities;

(F) appropriate provision for environmental water needs and for the effect of upstream development on the bays, estuaries, and arms of the Gulf of Mexico and the effect of plans on navigation;

(G) provisions in Section 11.085(k)(1) if interbasin transfers are contemplated;

(H) voluntary transfer of water within the region using, but not limited to, regional water banks, sales, leases, options, subordination agreements, and financing agreements; ~~and~~

(I) emergency transfer of water under Section 11.139, including information on the part of each permit, certified filing, or certificate of adjudication for nonmunicipal use in the region that may be transferred without causing unreasonable damage to the property of the nonmunicipal water rights holder; and

(J) opportunities for and the benefits of developing large-scale desalination facilities

(B) factors specific to each source of water supply to be considered in determining whether to initiate a drought response;

(C) actions to be taken as part of the response; and

(D) existing major water infrastructure facilities that may be used for interconnections in the event of an emergency shortage of water;

(4) has specific provisions for water management strategies to be used during a drought of record;

(5) includes but is not limited to consideration of the following:

(A) any existing water or drought planning efforts addressing all or a portion of the region;

(B) approved groundwater conservation district management plans and other plans submitted under Section 16.054;

(C) all potentially feasible water management strategies, including but not limited to improved conservation, reuse, and management of existing water supplies, conjunctive use, acquisition of available existing water supplies, and development of new water supplies;

(D) protection of existing water rights in the region;

(E) opportunities for and the benefits of developing regional water supply facilities or providing regional management of water supply facilities;

(F) appropriate provision for environmental water needs and for the effect of upstream development on the bays, estuaries, and arms of the Gulf of Mexico and the effect of plans on navigation;

(G) provisions in Section 11.085(k)(1) if interbasin transfers are contemplated;

(H) voluntary transfer of water within the region using, but not limited to, regional water banks, sales, leases, options, subordination agreements, and financing agreements; ~~and~~

(I) emergency transfer of water under Section 11.139, including information on the part of each permit, certified filing, or certificate of adjudication for nonmunicipal use in the region that may be transferred without causing unreasonable damage to the property of the nonmunicipal water rights holder; and

(J) opportunities for and the benefits of developing large-scale desalination facilities

for brackish groundwater or seawater that serve local or regional brackish groundwater production zones identified or designated under Section 16.060(b)(5);

(6) identifies river and stream segments of unique ecological value and sites of unique value for the construction of reservoirs that the regional water planning group recommends for protection under Section 16.051;

(7) assesses the impact of the plan on unique river and stream segments identified in Subdivision (6) if the regional water planning group or the legislature determines that a site of unique ecological value exists;

(8) describes the impact of proposed water projects on water quality; and

(9) includes information on:

(A) projected water use and conservation in the regional water planning area; and

(B) the implementation of state and regional water plan projects, including water conservation strategies, necessary to meet the state's projected water demands.

SECTION 2. Section 16.060, Water Code, is amended by amending Subsections (a) and (b) and adding Subsection (d) to read as follows:

(a) The board shall undertake or participate in research, feasibility and facility planning studies, investigations, and surveys as it considers necessary to further the development of cost-effective water supplies from seawater or brackish groundwater desalination in the state.

(b) The board shall prepare a biennial progress report on the implementation of seawater or brackish groundwater desalination activities in the state and shall submit it to the governor, lieutenant governor, and speaker of the house of representatives not later than December 1 of each even-numbered year. The report shall include:

(1) results of the board's studies and activities relative to seawater or brackish groundwater desalination during the preceding biennium;

(2) identification and evaluation of research, regulatory, technical, and financial impediments to the implementation of seawater or brackish groundwater desalination projects;

(3) evaluation of the role the state should

for seawater or brackish groundwater that serve local or regional brackish groundwater production zones identified and designated under Section 16.060(b)(5);

(6) identifies river and stream segments of unique ecological value and sites of unique value for the construction of reservoirs that the regional water planning group recommends for protection under Section 16.051;

(7) assesses the impact of the plan on unique river and stream segments identified in Subdivision (6) if the regional water planning group or the legislature determines that a site of unique ecological value exists;

(8) describes the impact of proposed water projects on water quality; and

(9) includes information on:

(A) projected water use and conservation in the regional water planning area; and

(B) the implementation of state and regional water plan projects, including water conservation strategies, necessary to meet the state's projected water demands.

SECTION 3. Section 16.060, Water Code, is amended by amending Subsections (a) and (b) and adding Subsections (d) and (e) to read as follows:

(a) The board shall undertake or participate in research, feasibility and facility planning studies, investigations, and surveys as it considers necessary to further the development of cost-effective water supplies from seawater or brackish groundwater desalination in the state.

(b) The board shall prepare a biennial progress report on the implementation of seawater or brackish groundwater desalination activities in the state and shall submit it to the governor, lieutenant governor, and speaker of the house of representatives not later than December 1 of each even-numbered year. The report shall include:

(1) results of the board's studies and activities relative to seawater or brackish groundwater desalination during the preceding biennium;

(2) identification and evaluation of research, regulatory, technical, and financial impediments to the implementation of seawater or brackish groundwater desalination projects;

(3) evaluation of the role the state should

play in furthering the development of large-scale seawater or brackish groundwater desalination projects in the state; ~~and~~

(4) the anticipated appropriation from general revenues necessary to continue investigating water desalination activities in the state during the next biennium; and

(5) identification and designation of local or regional brackish groundwater production zones in areas of the state with moderate to high availability and productivity of brackish groundwater that can be used to reduce the use of fresh groundwater and that:

(A) are separated by hydrogeologic barriers sufficient to prevent significant impacts to water availability or water quality in other aquifers, subdivisions of aquifers, or geologic strata;

(B) are not, at the time of designation as a brackish groundwater production zone, serving as a primary water supply for any purpose other than supplying a desalination project; and

(C) are not located:

(i) in areas determined to be susceptible to subsidence; or

(ii) within the boundaries of the Edwards Aquifer Authority and over the Edwards Aquifer.

(d) The board shall work together with groundwater conservation districts and stakeholders and shall consider the Brackish Groundwater Manual for Texas Regional Water Planning Groups, and any updates to the manual, and other relevant scientific

play in furthering the development of large-scale seawater or brackish groundwater desalination projects in the state; ~~and~~

(4) the anticipated appropriation from general revenues necessary to continue investigating water desalination activities in the state during the next biennium; and

(5) identification and designation of local or regional brackish groundwater production zones in areas of the state with moderate to high availability and productivity of brackish groundwater that can be used to reduce the use of fresh groundwater and that:

(A) are separated by hydrogeologic barriers sufficient 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 zones; and

(B) are not located in:

(i) an area of the Edwards Aquifer subject to the jurisdiction of the Edwards Aquifer Authority;

(ii) the boundaries of the:

(a) Barton Springs-Edwards Aquifer Conservation District;

(b) Harris-Galveston Subsidence District;  
or

(c) Fort Bend Subsidence District;

(iii) an aquifer, subdivision of an aquifer, or geologic stratum that:

(a) has an average total dissolved solids level of more than 1,000 milligrams per liter; and

(b) is serving as a significant source of water supply for municipal, domestic, or agricultural purposes at the time of designation of the zones; or

(iv) an area of a geologic stratum that is designated or used for wastewater injection through the use of injection wells or disposal wells permitted under Chapter 27.

(d) The board shall work together with groundwater conservation districts and stakeholders and shall consider the Brackish Groundwater Manual for Texas Regional Water Planning Groups, and any updates to the manual, and other relevant scientific

data or findings when identifying and designating brackish groundwater production zones under Subsection (b)(5).

data or findings when identifying and designating brackish groundwater production zones under Subsection (b)(5).

(e) In designating a brackish groundwater production zone under this section, the board shall:

(1) determine the amount of brackish groundwater that the zone is capable of producing over a 30-year period and a 50-year period without causing a significant impact to water availability or water quality as described by Subsection (b)(5)(A); and

(2) include in the designation description:

(A) the amounts of brackish groundwater that the zone is capable of producing during the periods described by Subdivision (1); and

(B) recommendations regarding reasonable monitoring to observe the effects of brackish groundwater production within the zone.

SECTION 3. Subchapter D, Chapter 36, Water Code, is amended by adding Section 36.1015 to read as follows:

Sec. 36.1015. RULES FOR PERMITS IN BRACKISH GROUNDWATER PRODUCTION ZONES.

(a) In this section, "designated brackish groundwater production zone" means an aquifer, subdivision of an aquifer, or geologic stratum designated under Section 16.060(b)(5).

(b) On receipt of a petition from a person with a legally defined interest in groundwater in the district, a district located over any part of a designated brackish groundwater production zone shall adopt rules for the issuance of permits to withdraw brackish groundwater from a well in a designated brackish groundwater production zone for a project designed to treat brackish groundwater to drinking water standards.

The rules must:

(1) allow unlimited withdrawals and rates of withdrawal of brackish groundwater from a designated brackish groundwater production zone;

(2) provide for a minimum term of 30 years for a permit issued for a well that produces brackish groundwater from a designated brackish groundwater production zone;

(3) require reasonable monitoring of an aquifer, subdivision of an aquifer, or geologic stratum adjacent to a designated brackish groundwater production zone;

No equivalent provision.

(4) allow the district to amend a permit issued under rules adopted under this section following receipt of a report requested under Subsection (c); and

(5) require reports from the holder of a permit issued under rules adopted under this section that must include:

(A) the amount of brackish groundwater withdrawn;

(B) the average monthly water quality of the brackish groundwater withdrawn; and

(C) aquifer levels in both the designated brackish groundwater production zone and in any aquifer, subdivision of an aquifer, or geologic stratum for which the permit requires monitoring.

(c) The district shall provide the reports required under Subsection (b)(5) to the Texas Water Development Board. On request from the district, the development board shall investigate and issue a report on whether brackish groundwater withdrawals from the designated brackish groundwater production zone are causing:

(1) significant aquifer level declines; or

(2) adverse impacts to water quality in an aquifer, subdivision of an aquifer, or geologic stratum.

(d) After receiving a report requested under Subsection (c), the district may, after notice and hearing:

(1) amend the applicable permit to establish a production limit necessary to mitigate any impacts identified by the report;

(2) approve a mitigation plan that alleviates any adverse impacts identified by the report;

or

(3) both amend the permit to establish a production limit and approve a mitigation plan.

SECTION 4. Section 36.1071(a), Water Code, is amended to read as follows:

(a) Following notice and hearing, the district shall, in coordination with surface water management entities on a regional basis, develop a management plan that addresses the following management goals, as applicable:

(1) providing the most efficient use of groundwater;

(2) controlling and preventing waste of groundwater;

(3) controlling and preventing subsidence;

(4) addressing conjunctive surface water

No equivalent provision.



- management issues;
- (5) addressing natural resource issues;
  - (6) addressing drought conditions;
  - (7) addressing conservation, recharge enhancement, rainwater harvesting, precipitation enhancement, or brush control, where appropriate and cost-effective; ~~and~~
  - (8) addressing the desired future conditions adopted by the district under Section 36.108; and
  - (9) identifying goals for the development of brackish groundwater desalination strategies in designated brackish groundwater production zones.

SECTION 5. Section 36.108(d-2), Water Code, is amended to read as follows:

(d-2) The desired future conditions proposed under Subsection (d) must provide a balance between the highest practicable level of groundwater production and the conservation, preservation, protection, recharging, and prevention of waste of groundwater and control of subsidence in the management area. The desired future conditions do not apply to brackish groundwater production in designated brackish groundwater production zones.

This subsection does not prohibit the establishment of desired future conditions that provide for the reasonable long-term management of groundwater resources consistent with the management goals under Section 36.1071(a). The desired future conditions proposed under Subsection (d) must be approved by a two-thirds vote of all the district representatives for distribution to the districts in the management area. A period of not less than 90 days for public comments begins on the day the proposed desired future conditions are mailed to the districts. During the public comment period and after posting notice as required by Section 36.063, each district shall hold a public hearing on any proposed desired future conditions relevant to that district. During the public comment period, the district shall make available in its office a copy of the proposed desired future conditions and any supporting materials, such as the documentation of factors considered under Subsection (d) and groundwater availability model run results. After the public hearing, the district shall compile for consideration at the next joint

No equivalent provision.

planning meeting a summary of relevant comments received, any suggested revisions to the proposed desired future conditions, and the basis for the revisions.

No equivalent provision.

SECTION 6. This Act takes effect September 1, 2015.

SECTION 4. (a) The Texas Water Development Board shall include in the biennial progress report required by Section 16.060, Water Code, that is due not later than December 1, 2016, an identification and designation of brackish groundwater production zones as required by that section as amended by this Act for the following:

- (1) the portion of the Carrizo-Wilcox Aquifer located between the Colorado and Rio Grande Rivers;
- (2) the Gulf Coast Aquifer and sediments bordering that aquifer;
- (3) the Blaine Aquifer; and
- (4) the Rustler Aquifer.

(b) Not later than December 1, 2022, the Texas Water Development Board shall identify and designate brackish groundwater production zones for areas of this state not described by Subsection (a) of this section.

SECTION 5. This Act takes effect immediately if it receives a vote of two-thirds of all the members elected to each house, as provided by Section 39, Article III, Texas Constitution. If this Act does not receive the vote necessary for immediate effect, this Act takes effect September 1, 2015.