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H.B. No. 2578

A BILL TO BE ENTITLED

AN ACT

1  
2 relating to the development of brackish groundwater and the use of  
3 brackish water and seawater; providing a penalty.

4 BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF TEXAS:

5 SECTION 1. (a) With this state facing an ongoing drought,  
6 continuing population growth, and the need to remain economically  
7 competitive, this state must secure and develop plentiful and  
8 cost-effective water supplies to meet the ever-increasing demand  
9 for water. The purpose of this Act is not to hinder conservation  
10 efforts, because such efforts help reduce the need for new sources  
11 of water, or to hinder current development of fresh groundwater,  
12 fresh surface water, water reclamation, or aquifer storage and  
13 recovery. However, this state must explore every water resource in  
14 order to balance the supply and demand for water, one of the most  
15 precious resources of this state.

16 (b) Brackish groundwater and marine seawater are  
17 potentially new sources of public drinking water for this state.  
18 This state has an estimated 880 trillion gallons of brackish  
19 groundwater and access to over 600 quadrillion gallons of marine  
20 seawater from the Gulf of Mexico. The purpose of this Act is to  
21 streamline the process and reduce the cost and regulation of  
22 desalination.

23 SECTION 2. Section 11.121, Water Code, is amended to read as  
24 follows:

1           Sec. 11.121. PERMIT REQUIRED.       Except as provided in  
2 Sections 11.142, 11.1421, [~~and~~] 11.1422, and 11.1423 [~~of this~~  
3 ~~code~~], no person may appropriate any state water or begin  
4 construction of any work designed for the storage, taking, or  
5 diversion of water without first obtaining a permit from the  
6 commission to make the appropriation.

7           SECTION 3. Section 11.1311, Water Code, is amended by  
8 amending Subsection (b) and adding Subsection (b-1) to read as  
9 follows:

10           (b) The board may transfer interests in a permit issued  
11 under Subsection (a) [~~this section~~] to a municipality, river  
12 authority, other political subdivision, or water supply  
13 corporation organized under Chapter 67 as otherwise provided by  
14 law.

15           (b-1) In this subsection, "marine seawater" has the meaning  
16 assigned by Section 11.1423, and "brackish water" means water that  
17 contains a total dissolved solids concentration of more than 1,000  
18 milligrams per liter and is not marine seawater. On submission of an  
19 application to the commission, the commission shall issue without a  
20 hearing a permit to use the bed and banks of any flowing natural  
21 stream in the state to convey marine seawater or brackish water.  
22 The commission shall adopt rules to implement a procedure for  
23 application for a permit to convey marine seawater or brackish  
24 water consistent with this subsection. A flowing natural stream  
25 does not include impounded water. The commission shall provide  
26 notice and an opportunity for hearing for an application for a  
27 permit to convey marine seawater or brackish water into or through a

1 lake, reservoir, or other impoundment.

2 SECTION 4. Subchapter D, Chapter 11, Water Code, is amended  
3 by adding Section 11.1423 to read as follows:

4 Sec. 11.1423. PERMIT EXEMPTION FOR USE BY WATER SUPPLY  
5 ENTITY OF MARINE SEAWATER. (a) In this section:

6 (1) "Marine seawater" means water that contains a  
7 total dissolved solids concentration based on a yearly average of  
8 samples taken at the water source of more than 10,000 milligrams per  
9 liter that is derived from the Gulf of Mexico or an adjacent bay,  
10 estuary, or arm of the Gulf of Mexico.

11 (2) "Water supply entity" includes:

12 (A) a retail public utility as defined by Section  
13 13.002;

14 (B) a wholesale water supplier; or

15 (C) an irrigation district operating under  
16 Chapter 58.

17 (b) Without obtaining a permit, a water supply entity may  
18 use for any beneficial purpose state water that consists of marine  
19 seawater.

20 (c) A water supply entity must treat marine seawater and  
21 brackish water so that it meets the water quality level of the  
22 receiving stream before the entity may put the water into a stream  
23 under an authorization granted under Section 11.042.

24 (d) This section does not prohibit a water supply entity  
25 from conveying water under this section in any other manner  
26 authorized by law, including through the use of facilities owned or  
27 operated by the state if authorized by the state.

1 SECTION 5. Section 16.053(e), Water Code, is amended to  
2 read as follows:

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

5 (1) is consistent with the guidance principles for the  
6 state water plan adopted by the development board under Section  
7 16.051(d);

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

11 (2-a) is consistent with the desired future conditions  
12 adopted under Section 36.108 for the relevant aquifers located in  
13 the regional water planning area as of the date the board most  
14 recently adopted a state water plan under Section 16.051 or, at the  
15 option of the regional water planning group, established subsequent  
16 to the adoption of the most recent plan;

17 (3) identifies:

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

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

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

27 and

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

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

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

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

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

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

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

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

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

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

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

4 (I) emergency transfer of water under Section  
5 11.139, including information on the part of each permit, certified  
6 filing, or certificate of adjudication for nonmunicipal use in the  
7 region that may be transferred without causing unreasonable damage  
8 to the property of the nonmunicipal water rights holder; and

9 (J) opportunities for and the benefits of  
10 developing large-scale desalination facilities for brackish  
11 groundwater or seawater that serve local or regional brackish  
12 groundwater production zones identified or designated under  
13 Section 16.060(c)(5);

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

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

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

24 (9) includes information on:

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

27 (B) the implementation of state and regional

1 water plan projects, including water conservation strategies,  
2 necessary to meet the state's projected water demands.

3 SECTION 6. Section 16.060, Water Code, is amended to read as  
4 follows:

5 Sec. 16.060. DESALINATION STUDIES AND RESEARCH. (a) In  
6 this section, "brackish water desalination project" means a  
7 desalination project the primary purpose of which is the  
8 development of new drinking water. The term does not include the  
9 reuse, recycling, or disposal of wastewater.

10 (b) The board shall undertake or participate in research,  
11 feasibility and facility planning studies, investigations, and  
12 surveys [~~as it considers~~] necessary to further the development of  
13 cost-effective water supplies from seawater or brackish water  
14 desalination in the state.

15 (c) [~~(b)~~] The board shall prepare a biennial progress  
16 report on the implementation of seawater or brackish water  
17 desalination activities in the state and shall submit it to the  
18 governor, lieutenant governor, and speaker of the house of  
19 representatives not later than December 1 of each even-numbered  
20 year. The report shall include:

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

24 (2) identification and evaluation of research,  
25 regulatory, technical, and financial impediments to the  
26 implementation of seawater or brackish water desalination  
27 projects;

1 (3) evaluation of the role the state should play in  
2 furthering the development of large-scale seawater or brackish  
3 water desalination projects in the state; [~~and~~]

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

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

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

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

18 (C) are not located:

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

21 (ii) in the Edwards Aquifer and within the  
22 boundaries of the Edwards Aquifer Authority; and

23 (6) information regarding state participation in  
24 public-private partnerships to advance research efforts, implement  
25 pilot projects, and develop new technologies related to:

26 (A) water transport;

27 (B) brine disposal;



1                    (C) pretreatment of seawater and brackish water;  
2 and  
3                    (D) innovative concentrate management  
4 strategies.

5            (d) [~~e~~] The board shall actively pursue federal sources  
6 of funding for seawater and brackish water desalination projects in  
7 the state.

8            (e) The board shall work together with groundwater  
9 conservation districts and stakeholders and shall consider the  
10 Brackish Groundwater Manual for Texas Regional Water Planning  
11 Groups, and any updates to the manual, and other relevant  
12 scientific data or findings when identifying and designating  
13 brackish water production zones under Subsection (c)(5).

14           (f) In preparing the report described by Subsection (c), the  
15 board shall incorporate input from water utilities, water  
16 providers, municipalities, and other public or private entities  
17 that have an interest in developing and implementing seawater or  
18 brackish water desalination projects.

19           (g) The board shall coordinate with the Texas Center for  
20 Innovative Desalination Technology and any other entity created by  
21 the state to study, promote, facilitate, or improve the  
22 development, financing, implementation, or enhancement of seawater  
23 or brackish water desalination technology or projects.

24           (h) The board shall coordinate with each agency identified  
25 in the report to provide assistance with applicable regulatory  
26 requirements to improve implementation of seawater or brackish  
27 water desalination technology or projects.

1 SECTION 7. Subchapter D, Chapter 36, Water Code, is amended  
2 by adding Section 36.1015 to read as follows:

3 Sec. 36.1015. RULES FOR PERMITS IN BRACKISH GROUNDWATER  
4 PRODUCTION ZONES. (a) In this section, "designated brackish  
5 groundwater production zone" means an aquifer, subdivision of an  
6 aquifer, or geologic stratum designated under Section  
7 16.060(c)(5).

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

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

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

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

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

27 (5) require reports from the holder of a permit issued

1 under rules adopted under this section that must include:

2 (A) the amount of brackish groundwater  
3 withdrawn;

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

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

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

15 (1) significant aquifer level declines; or

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

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

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

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

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

27 SECTION 8. Section 36.1071(a), Water Code, is amended to

1 read as follows:

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

6 (1) providing the most efficient use of groundwater;

7 (2) controlling and preventing waste of groundwater;

8 (3) controlling and preventing subsidence;

9 (4) addressing conjunctive surface water management  
10 issues;

11 (5) addressing natural resource issues;

12 (6) addressing drought conditions;

13 (7) addressing conservation, recharge enhancement,  
14 rainwater harvesting, precipitation enhancement, or brush control,  
15 where appropriate and cost-effective; ~~and~~

16 (8) addressing the desired future conditions adopted  
17 by the district under Section 36.108; and

18 (9) identifying goals for the development of brackish  
19 groundwater desalination strategies in designated brackish  
20 groundwater production zones.

21 SECTION 9. Section 36.108(d-2), Water Code, is amended to  
22 read as follows:

23 (d-2) The desired future conditions proposed under  
24 Subsection (d) must provide a balance between the highest  
25 practicable level of groundwater production and the conservation,  
26 preservation, protection, recharging, and prevention of waste of  
27 groundwater and control of subsidence in the management area. The

1 desired future condition does not apply to brackish groundwater  
2 production in designated brackish groundwater production zones.  
3 This subsection does not prohibit the establishment of desired  
4 future conditions that provide for the reasonable long-term  
5 management of groundwater resources consistent with the management  
6 goals under Section 36.1071(a). The desired future conditions  
7 proposed under Subsection (d) must be approved by a two-thirds vote  
8 of all the district representatives for distribution to the  
9 districts in the management area. A period of not less than 90 days  
10 for public comments begins on the day the proposed desired future  
11 conditions are mailed to the districts. During the public comment  
12 period and after posting notice as required by Section 36.063, each  
13 district shall hold a public hearing on any proposed desired future  
14 conditions relevant to that district. During the public comment  
15 period, the district shall make available in its office a copy of  
16 the proposed desired future conditions and any supporting  
17 materials, such as the documentation of factors considered under  
18 Subsection (d) and groundwater availability model run results.  
19 After the public hearing, the district shall compile for  
20 consideration at the next joint planning meeting a summary of  
21 relevant comments received, any suggested revisions to the proposed  
22 desired future conditions, and the basis for the revisions.

23 SECTION 10. Chapter 111, Education Code, is amended by  
24 adding Subchapter J to read as follows:

25 SUBCHAPTER J. TEXAS CENTER FOR INNOVATIVE

26 DESALINATION TECHNOLOGY

27 Sec. 111.131. DEFINITIONS. In this subchapter:

1           (1) "Boards" means the board of regents of the  
2 University of Houston System and the board of regents of The  
3 University of Texas System.

4           (2) "Center" means the Texas Center for Innovative  
5 Desalination Technology established under this subchapter.

6           Sec. 111.132. ESTABLISHMENT. (a) The Texas Center for  
7 Innovative Desalination Technology is established as a partnership  
8 between the University of Houston, The University of Texas at  
9 Brownsville, and The University of Texas at El Paso.

10           (b) The organization, control, and management of the center  
11 are vested in the boards, and the respective institutions shall  
12 execute a memorandum of understanding for that purpose.

13           (c) The center shall be hosted by the University of  
14 Houston's Cullen College of Engineering, The University of Texas at  
15 Brownsville's College of Science, Mathematics, and Technology, and  
16 The University of Texas at El Paso's Center for Inland Desalination  
17 Systems. Participation in the center's activities shall be open to  
18 any faculty or staff member of each host university who is an active  
19 researcher in the field of water desalination, engineering,  
20 hydrology, biology, water supply development, or energy  
21 efficiency, or in another relevant field as determined by the  
22 boards.

23           Sec. 111.133. PURPOSE. The center is created to:

24           (1) promote interdisciplinary research, education,  
25 and training for the development of state-of-the-art products,  
26 materials, systems, and technologies designed for the desalination  
27 of seawater from the Gulf of Mexico and brackish water within

1 surface and groundwater resources throughout the state; and  
2 (2) develop cost-effective, energy-efficient, and  
3 environmentally sound water desalination, brine disposal, and  
4 water conveyance technologies that can enhance the potential for  
5 desalinated water to contribute toward the state's long-term water  
6 portfolio.

7 Sec. 111.134. POWERS AND DUTIES. The center shall:

8 (1) collaborate with appropriate international,  
9 federal, state, and local agencies and private business or  
10 nonprofit entities as necessary to develop innovative desalination  
11 technologies;

12 (2) research and develop innovative seawater and  
13 brackish water desalination technologies, including pretreatment  
14 technologies and improvements, that are energy efficient and cost  
15 effective, minimize environmental impacts, and offer long-term  
16 water supply solutions for the state;

17 (3) research and develop brine disposal and reuse  
18 methods and technologies;

19 (4) research and develop water conveyance systems and  
20 technologies that may be used to transport desalinated water to  
21 target use populations;

22 (5) develop test facilities for evaluating the  
23 performance of new products, materials, or techniques;

24 (6) develop specifications and standards for products  
25 used for desalinating water, conveying water, and disposing of  
26 brine;

27 (7) provide public information, education, and

1 outreach regarding desalination technologies and appropriate uses  
2 and conservation methods for desalinated water; and

3 (8) provide data, recommendations, and any other  
4 information necessary relating to desalination for local,  
5 regional, or statewide water planning programs and processes.

6 Sec. 111.135. COLLABORATION WITH OTHER ENTITIES. The  
7 University of Houston, The University of Texas at Brownsville, and  
8 The University of Texas at El Paso shall encourage public and  
9 private entities to participate in or support the operation of the  
10 center and may enter into an agreement with any public or private  
11 entity for that purpose. An agreement may allow the center to  
12 provide information, services, or other assistance to an entity in  
13 exchange for the entity's participation or support.

14 Sec. 111.136. GIFTS AND GRANTS. The boards may solicit,  
15 accept, and administer gifts and grants from any public or private  
16 source for the purposes of the center.

17 Sec. 111.137. PERSONNEL. The boards may employ personnel  
18 for the center as necessary.

19 Sec. 111.138. EXPIRATION. This subchapter expires  
20 September 1, 2023.

21 SECTION 11. Section 341.001, Health and Safety Code, is  
22 amended by adding Subdivisions (1-a), (2-a), and (4-a) to read as  
23 follows:

24 (1-a) "Brackish water" means water that contains a  
25 total dissolved solids concentration of more than 1,000 milligrams  
26 per liter. The term does not include marine seawater.

27 (2-a) "Desalination facility" means a facility used



1 for the treatment of brackish water or marine seawater to remove  
2 dissolved mineral salts and other dissolved solids.

3 (4-a) "Marine seawater" means water that contains a  
4 total dissolved solids concentration based on a yearly average of  
5 samples taken at the water source of more than 10,000 milligrams per  
6 liter that is derived from the Gulf of Mexico or an adjacent bay,  
7 estuary, or arm of the Gulf of Mexico.

8 SECTION 12. Subchapter C, Chapter 341, Health and Safety  
9 Code, is amended by adding Section 341.0359 to read as follows:

10 Sec. 341.0359. DESALINATION OF WATER FOR DRINKING WATER.

11 (a) This section applies only to a desalination facility that is  
12 intended to produce water for the public drinking water supply.  
13 This section does not apply to a desalination facility used to  
14 produce nonpotable water.

15 (b) The commission shall adopt rules to:

16 (1) allow water treated by a desalination facility to  
17 be used as public drinking water; and

18 (2) ensure that water treated by a desalination  
19 facility meets the requirements of Section 341.031 and rules  
20 adopted under that section.

21 (c) A person may not begin construction of a desalination  
22 facility unless the commission approves in writing the plans and  
23 specifications for the facility.

24 (d) A person may not begin construction of a desalination  
25 facility that treats brackish water or marine seawater for the  
26 purpose of removing primary or secondary drinking water  
27 contaminants unless the commission approves in writing a report

1 containing:

2 (1) a computer model acceptable to the commission;

3 (2) a pilot study with a minimum 40-day run duration  
4 without treatment intervention to meet federal and state safe  
5 drinking water standards;

6 (3) data from a similar system installed at another  
7 desalination facility that treats source water of a similar or  
8 lower quality; or

9 (4) a full-scale verification protocol with a minimum  
10 40-day run duration without treatment intervention to meet federal  
11 and state safe drinking water standards.

12 (e) If a full-scale verification protocol report is  
13 approved, a person may not send water to a public water distribution  
14 system without a full-scale verification study:

15 (1) completed after construction; and

16 (2) approved by the commission.

17 (f) Not later than the 100th day after the date the  
18 commission receives the report for a proposed desalination  
19 facility, the commission shall review the report and issue an  
20 exception response letter that may contain conditions for approval.

21 (g) Not later than the 60th day after the date the  
22 commission receives the plans and specifications for a proposed  
23 desalination facility, the commission shall review the plans and  
24 specifications and issue a response letter that may contain  
25 conditions for approval.

26 (h) A person violates this section if the person fails to  
27 meet a condition for approval in a letter issued to the person under

1 Subsection (f) or (g).

2 SECTION 13. This Act takes effect September 1, 2013.