

## **BILL ANALYSIS**

C.S.H.B. 2334  
By: Callegari  
Natural Resources  
Committee Report (Substituted)

### **BACKGROUND AND PURPOSE**

It has been reported that Texas' population is expected to significantly increase in the coming years and that the state will need additional water supplies to meet agricultural and municipal demands in the future. Interested parties contend that in order for the state to remain competitive and continue to take advantage of economic development, it will need to secure cost-effective energy and water supplies. The parties note that desalination is a potential option for the long-term water needs of the state, as it has hundreds of trillions of gallons of brackish groundwater and access to thousands of trillions of gallons of marine seawater from the Gulf of Mexico. C.S.H.B. 2334 seeks to establish provisions relating to the regulation, development, and treatment of brackish and marine seawater in order to streamline and reduce the impediments of cost, concentrate disposal, and energy consumption in developing brackish groundwater and seawater and to begin laying the foundation by which the state can develop and handle desalination projects.

### **RULEMAKING AUTHORITY**

It is the committee's opinion that rulemaking authority is expressly granted to the Texas Commission on Environmental Quality (TCEQ) in SECTIONS 4 and 8 of this bill.

### **ANALYSIS**

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. The purpose of this Act is not to hinder conservation efforts, because such efforts help reduce the need for new sources of water, or to hinder current development of fresh groundwater, fresh surface water, water reclamation, or aquifer storage and recovery. However, this state must explore every water resource in order to balance the supply and demand for water, one of the most precious resources of this state.

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

SECTION 2. Amends Section 11.085, Water Code, by adding Subsection (w) as follows:

(w) Provides that this section does not apply to a transfer of water that has been diverted from the Gulf of Mexico to a location in a river basin or coastal basin.

SECTION 3. Amends Section 11.121, Water Code, as follows:

Sec. 11.121. PERMIT REQUIRED. Prohibits any person, except as provided in Sections 11.142, 11.1421, 11.1422, and 11.1423, from appropriating any state water or beginning construction of any work designed for the storage, taking, or diversion of water without first obtaining a permit from TCEQ to make the appropriation.

Makes nonsubstantive changes.

SECTION 4. Amends Section 11.1311, Water Code, by amending Subsection (b) and adding Subsection (b-1) as follows:

(b) Authorizes the board to transfer interests in a permit issued under Subsection (a) to a municipality, river authority, other political subdivision, or water supply corporation organized under Chapter 67 as otherwise provided by law.

(b-1) Provides that, in this subsection, "marine seawater" has the meaning assigned by Section 11.1423, and defines "brackish water" to mean water that contains a total dissolved solids concentration of more than 1,000 milligrams per liter and is not marine seawater. Requires TCEQ, on submission of an application to TCEQ, to issue without a hearing a permit to use the bed and banks of any flowing natural stream in the state to convey marine seawater or brackish water. Requires TCEQ to adopt rules to implement a procedure for application for a permit to convey marine seawater or brackish water consistent with this subsection. Provides that a flowing natural stream does not include impounded water. Requires TCEQ to provide notice and an opportunity for hearing for an application for a permit to convey marine seawater or brackish water into or through a lake, reservoir, or other impoundment.

Makes a nonsubstantive change.

SECTION 5. Amends Subchapter D, Chapter 11, Water Code, by adding Section 11.1423 as follows:

Sec. 11.1423. PERMIT EXEMPTION FOR USE BY WATER SUPPLY ENTITY OF MARINE SEAWATER. (a) Provides that in this section:

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

(2) Provides that a "water supply entity" includes:

- (A) a retail public utility as defined by Section 13.002;
- (B) a wholesale water supplier; or
- (C) an irrigation district operating under Chapter 58.

(b) Authorizes a water supply entity, without obtaining a permit, to use for any beneficial purpose state water that consists of marine seawater.

(c) Requires a water supply entity to treat marine seawater so that it meets the water quality level of the receiving stream before the entity is authorized to put the water into a stream under an authorization granted under Section 11.042.

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

SECTION 6. Amends Section 16.060, Water Code, as follows:

Sec. 16.060. DESALINATION STUDIES AND RESEARCH. (a) Defines, in this section, "inland desalination project" to mean a desalination project the primary purpose of which is the development of new drinking water. Provides that the term does not include the reuse, recycling, or disposal of wastewater.

(b) Requires the board to undertake or participate in research, feasibility and facility planning studies, investigations, and surveys necessary, rather than as it considers necessary, to further the development of cost-effective water supplies from inland and seawater desalination, rather than seawater desalination alone, in the state.

(c) Requires the board to prepare an annual, rather than a biennial, progress report on the implementation of inland and seawater desalination, rather than seawater desalination alone, activities in the state and to submit it to the governor, lieutenant governor, and

speaker of the house of representatives not later than December 1 of each year, rather than each even-numbered year. Requires the report to include:

- (1) results of the board's studies and activities relative to inland and seawater desalination, rather than seawater desalination alone, during the preceding year, rather than biennium;
- (2) identification and evaluation of research, regulatory, technical, and financial impediments to the implementation of inland and seawater desalination, rather than seawater desalination alone, projects;
- (3) evaluation of the role the state should play in furthering the development of inland and seawater desalination, rather than large-scale desalination, projects in the state;
- (4) the anticipated appropriation from general revenues necessary to continue investigating water desalination activities in the state during the next biennium; and
- (5) information regarding state participation in public-private partnerships to advance research efforts, implement pilot projects, and develop new technologies related to:
  - (A) water transport;
  - (B) brine disposal;
  - (C) pretreatment of brackish water and marine seawater; and
  - (D) innovative concentrate management strategies.

(d) Requires the board to actively pursue federal sources of funding for inland and seawater desalination projects in the state.

(e) Requires the board, in preparing the report described by Subsection (c), to incorporate input from water utilities, water providers, municipalities, and other public or private entities that have an interest in developing and implementing inland or seawater desalination projects.

(f) Requires the board to coordinate with the Texas Center for Innovative Desalination Technology and any other entity created by the state to study, promote, facilitate, or improve the development, financing, implementation, or enhancement of inland or seawater desalination technology or projects.

(g) Requires the board to coordinate with each agency identified in the report to provide assistance with applicable regulatory requirements to improve implementation of inland or seawater desalination technology or projects.

Makes nonsubstantive changes.

SECTION 7. Amends Section 341.001, Health and Safety Code, by adding Subdivisions (1-a), (2-a), and (4-a) as follows:

(1-a) Defines "brackish water" to mean water that contains a total dissolved solids concentration of more than 1,000 milligrams per liter. The term does not include marine seawater.

(2-a) Defines "desalination facility" to mean a facility used for the treatment of brackish water or marine seawater to remove dissolved mineral salts and other dissolved solids.

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

SECTION 8. Amends Subchapter C, Chapter 341, Health and Safety Code, by adding Section 341.0359 as follows:

Sec. 341.0359. DESALINATION OF WATER FOR DRINKING WATER. (a) Provides that this section applies only to a desalination facility that is intended to produce water for the public drinking water supply. Provides that this section does not apply to a desalination facility used to produce nonpotable water.

(b) Requires TCEQ to adopt rules to:

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

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

(c) Prohibits a person from beginning construction of a desalination facility unless TCEQ approves in writing the plans and specifications for the facility.

(d) Prohibits a person from beginning construction of a desalination facility that treats brackish water for the purpose of removing secondary drinking water contaminants unless TCEQ approves in writing a report containing:

(1) a computer model acceptable to TCEQ;

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

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

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

(e) Prohibits a person from beginning construction of a desalination facility that treats brackish water for the purpose of removing primary drinking water contaminants unless TCEQ approves in writing a report containing:

(1) a computer model acceptable to TCEQ;

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

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

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

(f) Prohibits a person from beginning construction of a desalination facility that treats marine seawater unless TCEQ approves in writing a report containing:

(1) a computer model acceptable to TCEQ;

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

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

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

(g) Requires TCEQ, not later than the 100th day after the date TCEQ receives the report for a proposed desalination facility, to review the report and issue an exception response letter that may contain conditions for approval.

(h) Requires TCEQ, not later than the 60th day after the date TCEQ receives the plans and specifications for a proposed desalination facility, to review the plans and specifications and issue a response letter that may contain conditions for approval.

(i) Provides that a person violates this section if the person fails to meet a condition for approval in a letter issued to the person under Subsection (g) or (h).

SECTION 9. Amends Chapter 111, Education Code, by adding Subchapter J as follows:

SUBCHAPTER J. TEXAS CENTER FOR INNOVATIVE  
DESALINATION TECHNOLOGY

Sec. 111.131. DEFINITIONS. Provides that in this subchapter:

(1) Defines "boards" to mean the board of regents of the University of Houston System and the board of regents of The University of Texas System.

(2) Defines "center" to mean the Texas Center for Innovative Desalination Technology established under this subchapter.

Sec. 111.132. ESTABLISHMENT. (a) Establishes the Texas Center for Innovative Desalination Technology as a partnership between the University of Houston, The University of Texas at Brownsville, and The University of Texas at El Paso.

(b) Provides that the organization, control, and management of the center are vested in the boards, and requires the respective institutions to execute a memorandum of understanding for that purpose.

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

Sec. 111.133. PURPOSE. Provides that the center is created to:

(1) promote interdisciplinary research, education, and training for the development of state-of-the-art products, materials, systems, and technologies designed for the desalination of seawater from the Gulf of Mexico and brackish water within surface and groundwater resources throughout the state; and

(2) develop cost-effective, energy-efficient, and environmentally sound water desalination, brine disposal, and water conveyance technologies that can enhance the potential for desalinated water to contribute toward the state's long-term water portfolio.

Sec. 111.134. POWERS AND DUTIES. Requires the center to:

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

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

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

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

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

- (6) develop specifications and standards for products used for desalinating water, conveying water, and disposing of brine;
- (7) provide public information, education, and outreach regarding desalination technologies and appropriate uses and conservation methods for desalinated water; and
- (8) provide data, recommendations, and any other information necessary relating to desalination for local, regional, or statewide water planning programs and processes.

Sec. 111.135. COLLABORATION WITH OTHER ENTITIES. Requires the University of Houston, The University of Texas at Brownsville, and The University of Texas at El Paso to encourage public and private entities to participate in or support the operation of the center and authorizes the entities to enter into an agreement with any public or private entity for that purpose. Authorizes an agreement to allow the center to provide information, services, or other assistance to an entity in exchange for the entity's participation or support.

Sec. 111.136. GIFTS AND GRANTS. Authorizes the boards to solicit, accept, and administer gifts and grants from any public or private source for the purposes of the center.

Sec. 111.137. PERSONNEL. Authorizes the boards to employ personnel for the center as necessary.

Sec. 111.138. EXPIRATION. Provides that this subchapter expires September 1, 2023.

SECTION 10. Provides for the effective date of this Act.

### **EFFECTIVE DATE**

Provides that 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. Provides that if this Act does not receive the vote necessary for immediate effect, this Act takes effect September 1, 2013.

### **COMPARISON OF ORIGINAL TO SUBSTITUTE**

#### 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. The purpose of this Act is not to hinder conservation efforts, because such efforts help reduce the need for new sources of water, or to hinder current development of fresh groundwater, fresh surface water, water reclamation, or aquifer storage and recovery. However, this state must explore every water resource in order to balance the supply and demand for water, one of the most precious resources of this state.

(b) Brackish groundwater and marine seawater are potentially new sources of public drinking water for this state. This state has an estimated 880 trillion gallons of brackish groundwater and access to over 600 quadrillion gallons of marine seawater from the Gulf of Mexico. The purpose of this Act

is to streamline the process and reduce the cost and regulation of desalination.

SECTION 1. Section 11.085, Water Code, is amended by adding Subsection (w) to read as follows:

(w) This section does not apply to a proposed transfer from one river basin in this state to another river basin in this state of water appropriated under Section 11.1423.

SECTION 2. Section 11.085, Water Code, is amended by adding Subsection (w) to read as follows:

(w) This section does not apply to a transfer of water that has been diverted from the Gulf of Mexico to a location in a river basin or coastal basin.

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

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

SECTION 3. Formerly SECTION 2. Same as introduced version.

No equivalent provision.

SECTION 4. Section 11.1311, Water Code, is amended by amending Subsection (b) and adding Subsection (b-1) to read as follows:

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

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

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

Sec. 11.1423. PERMIT EXEMPTION FOR

SECTION 5. Subchapter D, Chapter 11, Water Code, is amended by adding Section 11.1423 to read as follows:

Sec. 11.1423. PERMIT EXEMPTION FOR

APPROPRIATION BY WATER SUPPLY ENTITY OF BRACKISH OR MARINE WATER.

(a) In this section:

(1) "Brackish water" means water that contains a total dissolved solids concentration of more than 1,000 milligrams per liter and is not "Marine water".

(2) "Marine water" means water that contains a total dissolved solids concentration of more than 10,000 milligrams per liter and is derived from the Gulf of Mexico or an adjacent bay, estuary, or arm of the Gulf of Mexico.

(3) "Water supply entity" includes:

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

(B) a wholesale water supplier; or

(C) an irrigation district operating under Chapter 58.

(b) Without obtaining a permit, a water supply entity may appropriate for any beneficial use state water that consists of brackish water or marine water.

(c) A water supply entity may use the bed and banks of any flowing natural stream within the state to convey water appropriated under this section without obtaining an authorization under Section 11.042.

(d) A water supply entity may divert from a stream only the amount of water put into the stream by the entity, less carriage losses.

(e) A water supply entity must treat water so that it meets the standard for public drinking water established by Section 341.031(a), Health and Safety Code, before the entity may put the water into a stream.

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

SECTION 4. Section 36.001, Water Code, is amended by amending Subdivision (5) and adding Subdivision (31) to read as follows:

(5) "Groundwater" means water percolating below the surface of the earth. The term does not include brackish groundwater.

(31) "Brackish groundwater" means groundwater that contains a total dissolved solids concentration of more than 1,000 milligrams per liter.

SECTION 5. Section 36.117, Water Code, is amended by amending Subsection (l) and adding Subsection (m) to read as follows:

USE BY WATER SUPPLY ENTITY OF MARINE SEAWATER.

(a) In this section:

No equivalent provision.

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

(2) "Water supply entity" includes:

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

(B) a wholesale water supplier; or

(C) an irrigation district operating under Chapter 58.

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

No equivalent provision.

No equivalent provision.

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

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

No equivalent provision.

No equivalent provision.



(l) Except as provided by Subsection (m), this [This] chapter applies to water wells, including water wells used to supply water for activities related to the exploration or production of hydrocarbons or minerals. This chapter does not apply to production or injection wells drilled for oil, gas, sulphur, uranium, or brine, or for core tests, or for injection of gas, saltwater, or other fluids, under permits issued by the Railroad Commission of Texas.

(m) This chapter does not apply to wells used to withdraw brackish groundwater.

No equivalent provision.

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

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

(b) 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 inland and seawater desalination in the state.

(c) [~~(b)~~] The board shall prepare an annual [~~a biennial~~] progress report on the implementation of inland and seawater 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 inland and seawater desalination during the preceding year [~~biennium~~];

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

(3) evaluation of the role the state should play in furthering the development of inland and [~~large-scale~~] seawater 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) information regarding state participation in public-private partnerships to advance research efforts, implement pilot projects, and develop new technologies related to:

(A) water transport;

(B) brine disposal;

(C) pretreatment of brackish water and marine seawater; and

(D) innovative concentrate management strategies.

(d) [(e)] The board shall actively pursue federal sources of funding for inland and seawater desalination projects in the state.

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

(f) The board shall coordinate with the Texas Center for Innovative Desalination Technology and any other entity created by the state to study, promote, facilitate, or improve the development, financing, implementation, or enhancement of inland or seawater desalination technology or projects.

(g) The board shall coordinate with each agency identified in the report to provide assistance with applicable regulatory requirements to improve implementation of inland or seawater desalination technology or projects.

No equivalent provision.

SECTION 7. Section 341.001, Health and Safety Code, is amended by adding Subdivisions (1-a), (2-a), and (4-a) to read as follows:

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

(2-a) "Desalination facility" means a facility used for the treatment of brackish water or marine seawater to remove dissolved mineral salts and other dissolved solids.

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

No equivalent provision.

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

Sec. 341.0359. DESALINATION OF WATER FOR DRINKING WATER. (a) This section applies only to a desalination facility that is intended to produce water for the public drinking water supply. This section does not apply to a desalination facility used to produce nonpotable water.

- (b) The commission shall adopt rules to:
- (1) allow water treated by a desalination facility to be used as public drinking water; and
  - (2) ensure that water treated by a desalination facility meets the requirements of Section 341.031 and rules adopted under that section.
- (c) A person may not begin construction of a desalination facility unless the commission approves in writing the plans and specifications for the facility.
- (d) A person may not begin construction of a desalination facility that treats brackish water for the purpose of removing secondary drinking water contaminants unless the commission approves in writing a report containing:
- (1) a computer model acceptable to the commission;
  - (2) a pilot study with a minimum 40-day run duration without treatment intervention to meet federal and state safe drinking water standards;
  - (3) data from a similar system installed at another brackish water desalination facility that treats source water of a similar or lower quality; or
  - (4) a full-scale verification study with a minimum 40-day run duration without treatment intervention to meet federal and state safe drinking water standards.
- (e) A person may not begin construction of a desalination facility that treats brackish water for the purpose of removing primary drinking water contaminants unless the commission approves in writing a report containing:
- (1) a computer model acceptable to the commission;
  - (2) a pilot study with a minimum 40-day run duration without treatment intervention to meet federal and state safe drinking water standards;
  - (3) data from a similar system installed at another brackish water desalination facility that treats source water of a similar or lower quality; or
  - (4) a full-scale verification study with a minimum 40-day run duration without treatment intervention to meet federal and state safe drinking water standards.
- (f) A person may not begin construction of a desalination facility that treats marine seawater unless the commission approves in writing a report containing:
- (1) a computer model acceptable to the commission;
  - (2) a pilot study with a minimum 40-day run duration without treatment intervention to meet federal and state safe drinking water standards;

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

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

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

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

(i) A person violates this section if the person fails to meet a condition for approval in a letter issued to the person under Subsection (g) or (h).

No equivalent provision.

SECTION 9. Chapter 111, Education Code, is amended by adding Subchapter J to read as follows:

SUBCHAPTER J. TEXAS CENTER FOR INNOVATIVE DESALINATION TECHNOLOGY

Sec. 111.131. DEFINITIONS. In this subchapter:

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

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

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

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

(c) The center shall be hosted by the University of Houston's Cullen College of Engineering, The University of Texas at Brownsville's College of Science, Mathematics, and Technology, and The University of Texas at El Paso's Center for Inland Desalination Systems. Participation in the center's activities shall be open to any faculty or staff member of each host

university who is an active researcher in the field of water desalination, engineering, hydrology, biology, water supply development, or energy efficiency, or in another relevant field as determined by the boards.

No equivalent provision.

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

(1) promote interdisciplinary research, education, and training for the development of state-of-the-art products, materials, systems, and technologies designed for the desalination of seawater from the Gulf of Mexico and brackish water within surface and groundwater resources throughout the state; and

(2) develop cost-effective, energy-efficient, and environmentally sound water desalination, brine disposal, and water conveyance technologies that can enhance the potential for desalinated water to contribute toward the state's long-term water portfolio.

No equivalent provision.

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

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

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

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

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

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

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

(7) provide public information, education, and outreach regarding desalination technologies and appropriate uses and conservation methods for desalinated water; and

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

No equivalent provision.

Sec. 111.135. COLLABORATION WITH

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

No equivalent provision.

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

No equivalent provision.

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

No equivalent provision.

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

SECTION 6. This Act takes effect September 1, 2013.

SECTION 10. 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, 2013.