1-1 By: Seliger S.B. No. 1387 (In the Senate - Filed March 5, 2009; March 17, 2009, read first time and referred to Committee on Natural Resources; April 17, 2009, reported adversely, with favorable Committee 1-2 1-3 1-4 1-5 Substitute by the following vote: Yeas 9, Nays 0; April 17, 2009, 1-6 sent to printer.) COMMITTEE SUBSTITUTE FOR S.B. No. 1387 1-7 By: Seliger 1-8 A BILL TO BE ENTITLED 1-9 AN ACT 1-10 relating to the implementation of projects involving the capture, 1-11 injection, sequestration, or geologic storage of carbon dioxide. BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF TEXAS: 1-12 SECTION 1. Section 27.002, Water Code, is amended by adding Subdivisions (19), (20), (21), (22), (23), (24), and (25) to read as 1-13 1**-**14 1**-**15 follows: 1-16 (19) "Anthropogenic carbon dioxide": 1-17 (A) means: (i) carbon dioxide that would otherwise 1-18 1-19 1-20 have been released into the atmosphere that has been: stripped, segregated, or divided (a) 1-21 from any other fluid stream; or 1-22 (b) captured from an emissions 1-23 source, including: 1-24 <u>adv</u>anced clean (1)an energy project as defined by Section 382.003, Health and Safety Code, or another type of electric generation facility; or 1-25 1-26 1-27 (2) an industrial source of 1-28 emissions; (ii) any incidental associated substance derived from the source material for, or from the process of capturing, carbon dioxide described by Subparagraph (i); and 1-29 1-30 1-31 1-32 (iii) any substance added to carbon dioxide described by Subparagraph (i) to enable or improve the process of 1-33 1-34 injecting the carbon dioxide; and 1-35 (B) does not include naturally occurring carbon 1-36 dioxide that is recaptured, recycled, and reinjected as part of enhanced recovery operations. (20) "Anthropogenic carbon dioxide injection well" means an injection well used to inject or transmit anthropogenic carbon dioxide into a reservoir. 1-37 1-38 1-39 1-40 (21) "Enhanced recovery operation" means the use of 1-41 1-42 any process for the displacement of hydrocarbons from a reservoir other than primary recovery and includes the use of any physical, 1-43 1-44 thermal, or biological process and any chemical, co-production 1-45 project. 1-46 (22) "Geologic storage" means the underground storage of anthropogenic carbon dioxide in a reservoir. (23) "Geologic storage facility" means the underground reservoir, underground equipment, injection wells, and surface buildings and equipment used or to be used for the geologic 1-47 1-48 1-49 1-50 1-51 storage of anthropogenic carbon dioxide and all surface and 1-52 subsurface rights and appurtenances necessary to the operation of a facility for the geologic storage of anthropogenic carbon dioxide. 1-53 The term includes any reasonable and necessary areal buffer and subsurface monitoring zones, pressure fronts, and other areas as 1-54 1-55 may be necessary for this state to receive delegation of any federal 1-56 1-57 underground injection control program relating to the storage of carbon dioxide. The term does not include a pipeline used to transport carbon dioxide from the facility at which the carbon dioxide is captured to the geologic storage facility. The storage 1-58 1-59 1-60 1-61 carbon dioxide incidental to or as part of enhanced recovery of operations does not in itself automatically render a facility a 1-62 geologic storage facility. 1-63

2-1	C.S.S.B. No. 1387 (24) "Oil or gas" means oil, natural gas, or gas
2-2	condensate.
2-3 2-4	(25) "Reservoir" means a natural or artificially created subsurface sedimentary stratum, formation, aquifer,
2-5	cavity, void, or coal seam.
2 - 6 2 - 7	SECTION 2. Chapter 27, Water Code, is amended by adding Subchapter C-1 to read as follows:
2-8	SUBCHAPTER C-1. GEOLOGIC STORAGE AND ASSOCIATED INJECTION OF
2-9 2-10	ANTHROPOGENIC CARBON DIOXIDE Sec. 27.041. JURISDICTION. (a) Except as provided by
2-10	Subsection (b), the railroad commission has jurisdiction over the
2-12	geologic storage of carbon dioxide in, and the injection of carbon
2-13 2-14	dioxide into, a reservoir that is initially or may be productive of oil, gas, or geothermal resources or a saline formation directly
2-15	above or below that reservoir.
2 - 16 2 - 17	(b) The jurisdiction of the railroad commission over the geologic storage of carbon dioxide in, and the injection of carbon
2-18	dioxide into, a saline formation described by Subsection (a) is
2 - 19 2 - 20	subject to the review of the legislature based on the recommendations made in the preliminary report described by Section
2-20 2 - 21	10, S.B. No. 1387, Acts of the 81st Legislature, Regular Session,
2-22	2009.
2 - 23 2 - 24	(c) Except as provided by Subsection (b), the railroad commission has jurisdiction over a well used for the purpose
2-25	provided by Subsection (a) regardless of whether the well was
2 - 26 2 - 27	initially completed for that purpose or was initially completed for another purpose and is converted to the purpose provided by
2-28	Subsection (a).
2-29 2-30	Sec. 27.042. APPLICABILITY. This subchapter does not apply to the injection of fluid through the use of a Class II injection
2-30	well as defined by 40 C.F.R. Section 144.6(b) for the primary
2-32	purpose of enhanced recovery operations.
2 - 33 2 - 34	Sec. 27.043. PERMIT FROM RAILROAD COMMISSION. A person may not begin drilling or operating an anthropogenic carbon dioxide
2 - 35	injection well for geologic storage or constructing or operating a
2-36 2-37	geologic storage facility regulated under this subchapter without first obtaining the necessary permits from the railroad commission.
2-38	Sec. 27.044. INFORMATION REQUIRED OF APPLICANT. The
2-39 2-40	railroad commission shall require an applicant to provide any information the railroad commission considers necessary to
2-41	discharge its duties under this subchapter.
2-42 2-43	Sec. 27.045. FEES. (a) The railroad commission may impose fees to cover the cost of:
2-44	(1) permitting, monitoring, and inspecting anthropogenic carbon dioxide injection wells for geologic storage
2 - 45 2 - 46	anthropogenic carbon dioxide injection wells for geologic storage and geologic storage facilities; and
2-47	(2) enforcing and implementing this subchapter and
2 - 48 2 - 49	rules adopted by the railroad commission under this subchapter.
2-49	(b) Fees collected by the railroad commission under this section shall be deposited to the credit of the anthropogenic
2-51	carbon dioxide storage trust fund established under Section
2 - 52 2 - 53	<u>120.003, Natural Resources Code.</u> Sec. 27.046. LETTER FROM EXECUTIVE DIRECTOR. (a) An
2-54	application to the railroad commission for a permit under rules
2 - 55 2 - 56	adopted under this subchapter must include a letter from the executive director stating that drilling and operating the
2-57	anthropogenic carbon dioxide injection well for geologic storage or
2 - 58 2 - 59	operating the geologic storage facility will not injure any freshwater strata in that area and that the formation or stratum to
2-60	be used for the geologic storage facility is not freshwater sand.
2-61 2-62	(b) To make the determination required by Subsection (a), the executive director shall review:
2-63	the area of review and corrective action plans;
2 - 64 2 - 65	(2) any subsurface monitoring plans required during injection or post injection;
2 - 65 2 - 66	(3) any postinjection site care plans; and
2-67	(4) any other elements of the application reasonably
2-68 2-69	required in order for the executive director to make the determination required by Subsection (a).

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3-1 3-2	(c) The commission shall adopt rules to implement and administer this section.
3-3	Sec. 27.047. RULES. The railroad commission shall adopt
3 - 4 3 - 5	rules and procedures reasonably required for the performance of its powers, duties, and functions under this subchapter, including
3-5	rules for:
3-7	(1) the geologic storage and associated injection of
3-8 3-9	anthropogenic carbon dioxide, including: (A) geologic site characterization;
3-10	(B) area of review and corrective action;
3-11	(C) well construction;
3-12 3-13	<pre>(D) operation; (E) mechanical integrity testing;</pre>
3-14	(F) monitoring;
3-15 3-16	(G) well plugging; (H) postinjection site care;
3-17	(I) site closure; and
3-18	(J) long-term stewardship;
3-19 3-20	(2) the enforcement of this subchapter and rules adopted by the railroad commission under this subchapter; and
3-21	(3) the collection and administration of:
3-22 3-23	(A) fees imposed under Section 27.045; and (B) penalties imposed for a violation of this
3-24	subchapter or rules adopted by the railroad commission under this
3-25	subchapter.
3-26 3-27	Sec. 27.048. CONSISTENCY WITH AND IMPLEMENTATION OF FEDERAL REQUIREMENTS. (a) Rules adopted by the commission or the railroad
3-28	commission under this subchapter must be consistent with applicable
3-29 3-30	rules or regulations adopted by the United States Environmental Protection Agency or another federal agency governing the injection
3-31	and geologic storage of anthropogenic carbon dioxide.
3-32	(b) If rules or regulations adopted to govern the geologic
3 - 33 3 - 34	storage and associated injection of anthropogenic carbon dioxide under the federal Safe Drinking Water Act (42 U.S.C. Section 300f et
3-35	seq.) or another federal statute allow this state to seek primary
3-36 3-37	enforcement authority under the underground injection control program:
3-38	(1) the commission and the railroad commission shall
3-39 3-40	seek primacy to administer and enforce the program subject to the jurisdiction granted under this subchapter; and
3-41	(2) this state shall seek primacy to administer and
3-42 3-43	enforce the program for the geologic storage of carbon dioxide in, and the injection of carbon dioxide into, a saline formation.
3-44	Sec. 27.049. MEMORANDUM OF UNDERSTANDING. The commission
3 - 45 3 - 46	and the railroad commission, as necessary to comply with this subchapter, by rule shall:
3-40 3-47	(1) amend the memorandum of understanding recorded in
3-48	16 T.A.C. Section 3.30; or
3 - 49 3 - 50	(2) enter into a new memorandum of understanding. Sec. 27.050. FINANCIAL RESPONSIBILITY. (a) A person to
3-51	whom a permit is issued under this subchapter must provide to the
3 - 52 3 - 53	railroad commission annually evidence of financial responsibility that is satisfactory to the railroad commission.
3-54	(b) In determining whether the person is financially
3 - 55 3 - 56	responsible, the railroad commission shall rely on: (1) the person's most recent quarterly report filed
3-57	with the United States Securities and Exchange Commission under
3-58	Section 13 or 15(d), Securities Exchange Act of 1934 (15 U.S.C. Section 78m or 78o(d)); or
3-59 3-60	(2) if the person is not required to file with the
3-61	United States Securities and Exchange Commission a report described
3-62 3-63	by Subdivision (1), the person's most recent audited financial statement.
3-64	SECTION 3. Section 27.051, Water Code, is amended by
3-65 3-66	amending Subsection (b) and adding Subsection (b-1) to read as follows:
3-67	(b) The railroad commission may grant an application <u>for a</u>
3-68 3-69	permit under Subchapter C in whole or part and may issue the permit if it finds:
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C.S.S.B. No. 1387 that the use or installation of the injection well 4-1 (1)4-2 is in the public interest; 4-3 (2) that the use or installation of the injection well 4 - 4will not endanger or injure any oil, gas, or other mineral 4-5 formation; 4-6 (3) that, with proper safeguards, both ground and 4-7 surface fresh water can be adequately protected from pollution; and 4-8 (4) that the applicant has made a satisfactory showing 4-9 of financial responsibility if required by Section 27.073 [of this 4-10 4-11 code]. The (b-1)railroad commission may issue a permit under Subchapter C-1 if it finds: 4-12 4-13 (1) that the injection and geologic storage of anthropogenic carbon dioxide will not endanger or injure any oil, 4-14 4**-**15 4**-**16 gas, or other mineral formation; (2) that, with proper safeguards, both ground and surface freshwater can be adequately protected from carbon dioxide 4-17 4-18 migration or displaced formation fluids; (3) that the injection of anthropogenic carbon dioxide 4-19 4-20 4-21 will not endanger or injure human health and safety; (4) that the reservoir into which the anthropogenic carbon dioxide is injected is suitable for or capable of being made 4-22 suitable for protecting against the escape or migration of 4-23 4-24 anthropogenic carbon dioxide from the reservoir; and (5) 4-25 that the applicant for the permit meets all of the 4**-**26 other statutory and regulatory requirements for the issuance of the 4-27 permit. 4-28 SECTION 4. Sections 27.071 and 27.072, Water Code, are 4-29 amended to read as follows: Sec. 27.071. POWER TO ENTER PROPERTY. Members of commission and the railroad commission and employees of 4-30 the 4-31 the commission and the railroad commission may enter public or private 4-32 4-33 property to inspect and investigate conditions relating to injection well, monitoring well, disposal well, [or] production 4-34 well, or geologic storage activities within their respective jurisdictions or to monitor compliance with a rule, permit, or other order of the commission or railroad commission. Members or 4-35 4-36 4-37 4-38 employees acting under the authority of this section who enter an 4-39 establishment on public or private property shall observe the establishment's safety, internal security, and fire protection 4-40 4-41 rules. 4-42 Sec. 27.072. POWER TO EXAMINE RECORDS. Members of the commission and the railroad commission and employees of the commission and railroad commission may examine and copy those records or memoranda of a business they are investigating as provided by Section 27.071 [of this code] that relate to the operation of an injection well, monitoring well, disposal well, 4-43 4 - 444-45 4-46 4-47 4-48 [or] production well, or geologic storage facility, or any other records required to be maintained by law. 4-49 SECTION 5. Section 27.073, Water Code, is amended by amending Subsection (a) and adding Subsection (b-1) to read as 4-50 4-51 4-52 follows: 4-53 (a) A person to whom an injection well permit is issued may be required by the commission or railroad commission to maintain a 4-54 4-55 performance bond or other form of financial security to ensure 4-56 that: 4-57 (1) an abandoned injection well is properly plugged; 4-58 or (2) funds are available for plugging, postinjection and closure of an anthropogenic carbon dioxide injection 4-59 s<u>ite care,</u> 4-60 4-61 well subject to Subchapter C-1. 4-62 (b-1) The railroad commission is authorized to receive funds as the beneficiary of a financial responsibility mechanism established under this chapter for the proper management of an 4-63 4-64 4-65 anthropogenic carbon dioxide injection well or geologic storage 4-66 facility. 4-67 SECTION 6. Chapter 91, Natural Resources Code, is amended 4-68 by adding Subchapter R to read as follows: SUBCHAPTER R. AUTHORIZATION FOR MULTIPLE OR ALTERNATIVE USES OF 4-69

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5-1	WELLS WELLS
5-2	Sec. 91.801. RULES AUTHORIZING MULTIPLE OR ALTERNATIVE USES
5-3	OF WELLS. The commission shall adopt rules allowing:
5 - 4 5 - 5	(1) a person to obtain a permit for a well from the commission that authorizes the well to be used for multiple
5-6	purposes; and
5-7	(2) an operator of a well authorized by a permit issued
5 - 8 5 - 9	by the commission to convert the well from its authorized purpose to a new or additional purpose.
5-10	Sec. 91.802. LAW APPLICABLE TO GEOLOGIC STORAGE FACILITIES
5-11	AND ASSOCIATED INJECTION WELLS. (a) In this section,
5-12	"anthropogenic carbon dioxide injection well" has the meaning
5 - 13 5 - 14	assigned by Section 27.002, Water Code. (b) If a well is authorized as or converted to an
5-15	anthropogenic carbon dioxide injection well for geologic storage,
5-16	Subchapter C-1, Chapter 27, Water Code, applies to the well.
5 - 17 5 - 18	(c) A conversion of an anthropogenic carbon dioxide injection well from use for enhanced recovery operations to use for
5-19	qeologic storage is not considered to be a change in the purpose of
5-20	the well.
5-21	SECTION 7. Subtitle D, Title 3, Natural Resources Code, is
5 - 22 5 - 23	amended by adding Chapter 120 to read as follows: CHAPTER 120. OWNERSHIP AND STEWARDSHIP OF ANTHROPOGENIC CARBON
5-24	DIOXIDE
5-25	Sec. 120.001. DEFINITIONS. In this chapter:
5 - 26 5 - 27	(1) "Anthropogenic carbon dioxide," "anthropogenic carbon dioxide injection well," and "geologic storage facility"
5-28	have the meanings assigned by Section 27.002, Water Code.
5-29	(2) "Commission" means the Railroad Commission of
5 - 30 5 - 31	<u>Texas.</u> (3) "Storage operator" means a person authorized by
5-31	the commission to operate a geologic storage facility.
5-33	Sec. 120.002. OWNERSHIP OF ANTHROPOGENIC CARBON DIOXIDE.
5-34	(a) This section does not apply to anthropogenic carbon dioxide
5 - 35 5 - 36	injected for the primary purpose of enhanced recovery operations. (b) Unless otherwise expressly provided by a contract, bill
5 - 37	of sale, deed, mortgage, deed of trust, or other legally binding
5-38	document or by other law, anthropogenic carbon dioxide stored in a
5 - 39 5 - 40	geologic storage facility is considered to be the property of the storage operator or the storage operator's heirs, successors, or
5-41	assigns.
5-42	(c) Absent a final judgment of wilful abandonment rendered
5 - 43 5 - 44	by a court or a regulatory determination of closure or abandonment, anthropogenic carbon dioxide stored in a geologic storage facility
5-45	is not considered to be the property of the owner of the surface or
5-46	mineral estate in the land in which the anthropogenic carbon
5 - 47 5 - 48	dioxide is stored or of a person claiming under the owner of the surface or mineral estate.
5-49	(d) The owner, as designated by Subsection (b) or (c), of
5-50	the anthropogenic carbon dioxide stored in a geologic storage
5 - 51 5 - 52	facility, or the owner's heirs, successors, or assigns, may produce, take, extract, or otherwise possess anthropogenic carbon
5-52 5 - 53	dioxide stored in the facility.
5-54	Sec. 120.003. ANTHROPOGENIC CARBON DIOXIDE STORAGE TRUST
5-55	FUND. (a) The anthropogenic carbon dioxide storage trust fund is
5 - 56 5 - 57	created as a special fund in the state treasury.(b) The anthropogenic carbon dioxide storage trust fund is
5 - 58	an interest-bearing fund. Interest earned on money in the fund
5-59	shall be deposited to the credit of the fund.
5 - 60 5 - 61	(c) Fees collected by the commission under Subchapter C-1, Chapter 27, Water Code, and penalties imposed for violations of
5-62	that subchapter or rules adopted under that subchapter shall be
5-63	deposited to the credit of the anthropogenic carbon dioxide storage
5 - 64 5 - 65	trust fund. (d) The anthropogenic carbon dioxide storage trust fund may
5-65 5-66	(d) The anthropogenic carbon dioxide storage trust fund may be used by the commission only for:
5-67	(1) inspecting, monitoring, investigating, recording,
5 - 68	and reporting on geologic storage facilities and associated
5-69	anthropogenic carbon dioxide injection wells;

C.S.S.B. No. 1387 (2) of 6-1 long-term monitoring geologic storage and associated anthropogenic carbon dioxide 6-2 facilities injection wells; 6-3 6-4 remediation of mechanical (3) problems associated 6**-**5 6**-**6 with geologic storage facilities and associated anthropogenic carbon dioxide injection wells; repairing mechanical leaks at geologic storage 6-7 (4) f<u>acilities;</u> 6-8 (5)6-9 plugging abandoned anthropogenic carbon dioxide 6**-**10 6**-**11 injection wells used for geologic storage; (6) training and technology transfer related to anthropogenic carbon dioxide injection and geologic storage; and 6-12 6-13 (7)compliance and enforcement activities related to storage and associated anthropogenic carbon dioxide 6-14 geologic 6**-**15 6**-**16 injection wells. 120.004 EXTRACTION OF STORED ANTHROPOGENIC Sec. CARBON (a) The commission shall adopt rules allowing 6-17 DIOXIDE. 6-18 anthropogenic carbon dioxide stored in a geologic storage facility to be extracted for a commercial or industrial use. (b) The commission has jurisdiction over the extraction of anthropogenic carbon dioxide stored in a geologic storage facility. 6-19 6-20 6-21 6-22 SECTION 8. Section 27.038, Water Code, is repealed. 6-23 SECTION 9. (a) In this section: (1) "Anthropogenic carbon dioxide," "geologic storage," and "geologic storage facility" have the meanings assigned by Section 27.002, Water Code, as amended by this Act. 6-24 6**-**25 6**-**26 6-27 "State-owned land" includes state-owned submerged (2) 6-28 land. 6-29 Not later than December 1, 2010, the Commissioner of the (b) General Land Office shall prepare and file with the legislature a preliminary report on a recommended framework for managing 6-30 6-31 activities related to geologic storage on state-owned land. 6-32 The 6-33 report shall include: 6-34 recommended criteria for identifying candidate (1)6-35 geologic storage sites in each of the following types of onshore and 6-36 offshore geological settings: 6-37 (A) operating oil and gas fields; 6-38 (B) depleted oil and gas fields; 6-39 unmineable coal seams; (C) 6-40 (D) saline formations; 6-41 (E) geological systems that may be used as 6-42 engineered reservoirs to extract economical quantities of heat from 6-43 geothermal resources of low permeability or porosity; 6-44 (F) geological systems containing igneous 6-45 formations; and 6-46 (G) coalbeds being used for methane recovery; 6-47 (2) a proposed regulatory framework for leasing 6-48 state-owned land for geologic storage, including an assessment of options to ensure that the state receives fair market value for 6-49 6-50 using state-owned property for geologic storage; 6-51 a proposed procedure for: (3) 6-52 (A) providing an opportunity for public review 6-53 and the presentation of comments by interested persons of, regarding, any activities related to geologic storage state-owned land; and 6-54 on 6-55 6-56 (B) ensuring that the quality of the natural and 6-57 cultural resources of state-owned land overlying the site of a 6-58 geologic storage facility are protected from any geologic storage activities at the site; 6-59 (4) a description of the status of leasehold or estate liability issues related to the geological 6-60 6-61 mineral subsurface trespass of, or caused by, anthropogenic carbon dioxide 6-62 6-63 stored in state-owned land, including any relevant experience from enhanced oil recovery using carbon dioxide on state-owned land; 6-64 (5) recommendations for additional legislation that may be required to ensure that public land management and leasing 6-65 6-66 6-67 laws are adequate to accommodate geologic storage; 6-68 (6) an identification of the legal and regulatory 6-69 issues specific to geologic storage in cases in which title to the

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7-1 mineral estate is held by the state but title to the surface estate 7-2 is not held by the state; and

7-3 (7) recommendations for additional legislation that 7-4 may be required to clarify the appropriate framework for issuing 7-5 rights-of-way for anthropogenic carbon dioxide pipelines on 7-6 state-owned land.

7-7 (c) In preparing the preliminary report under Subsection 7-8 (b) of this section, the Commissioner of the General Land Office 7-9 shall coordinate with:

7-10 (1)the Bureau of Economic Geology of The University 7-11 of Texas at Austin;

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(2) the Railroad Commission of Texas;

(3)the Texas Commission on Environmental Quality; and (4) the heads of other appropriate agencies.

7**-**15 7**-**16 (d) This section expires December 31, 2010. SECTION 10. (a) In this section, "anthropogenic carbon dioxide," "geologic storage," and "geologic storage facility" have 7-17 the meanings assigned by Section 27.002, Water Code, as amended by 7-18 7-19 this Act.

7**-**20 7**-**21 (b) Not later than December 1, 2010, the Texas Commission on Environmental Quality and the Railroad Commission of Texas, in consultation with the Bureau of Economic Geology of The University 7-22 7-23 of Texas at Austin, shall prepare and file with the legislature a 7-24 joint preliminary report that:

7-25 (1) analyzes the requirements for the injection and , 7**-**26 geologic storage of anthropogenic carbon dioxide into saline 7-27 formations that are not productive of oil, gas, or geothermal 7-28 resources;

7-29 (2) recommends a permitting process for anthropogenic 7-30 carbon dioxide injection wells and geologic storage facilities that -7**-**31 are used for the injection and storage of anthropogenic carbon 7-32 dioxide in saline formations not productive of oil, gas, or 7-33 geothermal resources;

7-34 (3) recommends the agency or agencies that should have jurisdiction over permitting described by Subdivision (2) of this subsection or any other permitting of geologic storage facilities not subject to Subchapter C-1, Chapter 27, Water Code; and 7-35 7-36 7-37

7-38 (4)assesses the status of compliance with any federal 7-39 rules regulating the geologic storage and associated injection of 7-40 anthropogenic carbon dioxide. 7-41 (c)

The preliminary report shall include:

7-42 recommended criteria for identifying candidate (1)7-43 geologic storage sites in each of the following types of geological 7-44 settings: 7-45

(A) operating oil and gas fields;

(B) depleted oil and gas fields;

(C) unmineable coal seams;

(D) saline formations;

that may be used 7-49 (E) geological systems as 7-50 engineered reservoirs to extract economical quantities of heat from 7-51 geothermal resources of low permeability or porosity; (F) geological systems containing igneous

7-52 7-53 formations; and

coalbeds being used for methane recovery; (G)

a proposed procedure for: (2)

7-56 (A) providing an opportunity for public review 7-57 comments by interested persons of, and the presentation of 7-58 regarding, any activities related to geologic storage; and

(B) ensuring that the quality of the natural and cultural resources of land overlying the site of a geologic storage 7-59 7-60 7-61 facility are protected from any geologic storage activities at the 7-62 site;

7-63 a description of the status of leasehold or (3) estate liability issues related to the geological 7-64 mineral subsurface trespass of, or caused by, anthropogenic carbon dioxide stored in private or state-owned land, including any relevant 7-65 7-66 7-67 experience from enhanced recovery operations using carbon dioxide; 7-68 an analysis of and recommendations to address: (4)

(A) the attributes of the subsurface area of

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operations for geologic storage facilities; and 8-1 8-2 (B) the methods of financial assurance and the 8-3 allocation of long-term liability for the post-operational phases 8-4 of geologic storage projects;

(5) the status of any applications for permits that have been received before the report is prepared; 8-5 8-6

8-7 (6) an update on the exchange of information between 8-8 the Texas Commission on Environmental Quality and the Railroad Commission of Texas as required by the memorandum of understanding 8-9 described by Section 27.049, Water Code, as added by this Act, and as required by Section 27.046, Water Code, as added by this Act; (7) the status of any request for primary enforcement 8-10 8-11

8-12 authority for the underground injection and geologic storage of anthropogenic carbon dioxide under the underground injection 8-13 8-14 control program; and

8**-**15 8**-**16 (8) any recommendations for additional legislation, modifications to the memorandum of understanding, or new rules for 8-17 8-18 regulating geologic storage facilities and associated anthropogenic carbon dioxide injection wells. 8-19

(d) This section expires December 31, 2010.

8-20 8-21 SECTION 11. (a) The Texas Commission on Environmental 8-22 Quality shall adopt rules under Section 27.046, Water Code, as added by this Act, as soon as practicable after the effective date 8-23 8-24 of this Act.

8**-**25 8**-**26 (b) Not later than March 1, 2010, the Railroad Commission of Texas shall adopt rules under Section 27.047, Water Code, as added 8-27 by this Act, for the geologic storage and associated injection of 8-28 carbon dioxide in connection with enhanced recovery operations, 8-29 excluding enhanced recovery operations for which:

(1) there is a reasonable expectation of more than insignificant future production volumes or rates as a result of the 8-30 8-31 8-32 injection of anthropogenic carbon dioxide; and

8-33 (2) operating pressures are not higher than reasonably necessary to produce the production volumes or rates described by Subdivision (1) of this subsection. 8-34 8-35

8-36 (c) Not later than September 2010, the 1, Railroad Commission of Texas shall adopt rules under Section 27.047, Water 8-37 Code, as added by this Act, for the geologic storage of carbon dioxide in, and the injection of carbon dioxide into, a reservoir 8-38 8-39 8-40 that is initially or may be productive of oil, gas, or geothermal 8-41 resources.

8-42 (d) The Texas Commission on Environmental Quality and the 8-43 Railroad Commission of Texas shall adopt rules under Section 27.049, Water Code, as added by this Act, as soon as practicable after the effective date of this Act. 8-44 8-45

8-46 (e) The Railroad Commission of Texas shall adopt rules under Sections 91.801 and 120.004, Natural Resources Code, as added by 8-47 8-48 this Act, as soon as practicable after the effective date of this 8-49 Act.

8-50 SECTION 12. This Act takes effect September 1, 2009.

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