

By the Committees on Environmental Protection, Water &
Resource Management and Representatives Alexander, Betancourt,
K. Smith, Boyd and Cantens

1 A bill to be entitled
2 An act relating to water resources; amending s.
3 403.0882, F.S.; reorganizing and clarifying the
4 section; providing findings and declaration;
5 providing definitions; directing the Department
6 of Environmental Protection to initiate
7 rulemaking, by a specified date, to address
8 facilities that discharge demineralization
9 concentrate; creating a technical advisory
10 committee to assist in rule development;
11 providing permitting requirements relating to
12 failure of toxicity tests due to naturally
13 occurring constituents; providing requirements
14 for discharge of demineralization concentrate
15 from small water utility businesses; providing
16 additional rulemaking authority; amending s.
17 403.061, F.S.; providing an exemption allowing
18 demineralization concentrate mixing zones in
19 Outstanding Florida Waters if specific
20 requirements are met; creating s. 403.065,
21 F.S.; providing findings and declarations;
22 providing for classification and permitting of
23 aquifer storage and recovery wells; providing a
24 zone of discharge for aquifer storage and
25 recovery wells meeting specific criteria;
26 providing monitoring requirements for aquifer
27 storage and recovery wells; requiring an
28 aquifer exemption for aquifer storage and
29 recovery wells not exceeding primary drinking
30 water standards other than total coliform
31 bacteria or sodium; requiring the department to

1 make a reasonable effort to issue or deny
2 permits within 90 days; providing the
3 department with rulemaking authority to
4 implement this section; providing an effective
5 date.

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7 Be It Enacted by the Legislature of the State of Florida:

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9 Section 1. Section 403.0882, Florida Statutes, is
10 amended to read:

11 (Substantial rewording of section. See
12 s. 403.0882, F.S., for present text.)

13 403.0882 Discharge of demineralization concentrate.--

14 (1) The Legislature finds and declares that it is in
15 the public interest to conserve and protect water resources;
16 provide adequate water supplies and provide for natural
17 systems; and promote brackish water demineralization as an
18 alternative to ground and surface water withdrawals of
19 freshwater, by removing institutional barriers to
20 demineralization and through conducting research, including
21 demonstration projects, to advance water and water byproduct
22 treatment technology, sound waste byproduct disposal methods,
23 and regional solutions to water resources issues. In order to
24 promote the state objective of alternative water supply
25 development, including the use of demineralization
26 technologies, and encourage the conservation and protection of
27 Florida's natural resources, the concentrate resulting from
28 demineralization shall be classified as potable water
29 byproduct regardless of flow quantity and shall be
30 appropriately treated, and discharged or reused.

31 (2) For the purposes of this section, the term:

1 (a) "Demineralization concentrate" means the
2 concentrated byproduct water, brine, or reject water produced
3 by ion exchange or membrane separation technologies, such as
4 reverse osmosis, membrane softening, ultra-filtration,
5 membrane filtration, electrodialysis, and electrodialysis
6 reversal, used for desalination, softening, or reducing total
7 dissolved solids during water treatment for public water
8 supply purposes.

9 (b) "Small water utility business" means any facility
10 that distributes potable water to two or more customers with a
11 concentrate discharge of less than 50,000 gallons per day.

12 (3) The department shall initiate rulemaking no later
13 than October 1, 2000, to address facilities that discharge
14 demineralization concentrate. The department shall convene a
15 technical advisory committee to assist in the development of
16 the rules, which shall include one representative each from
17 the demineralization industry, local government, water and
18 wastewater utilities, the engineering profession, business,
19 and environmental organizations. The technical advisory
20 committee shall also include one member representing the five
21 water management districts. In convening the technical
22 advisory committee, consideration shall be given to
23 geographical balance. The rules shall address, at a minimum:

24 (a) Permit application forms for concentrate disposal.

25 (b) Specific options and requirements for
26 demineralization concentrate disposal, including a
27 standardized list of effluent and monitoring parameters, which
28 may be adjusted or expanded by the department as necessary to
29 protect water quality.

30 (c) Specific requirements and accepted methods for
31 evaluating mixing of effluent in receiving waters.

1 (d) Specific toxicity provisions.
2 (4)(a) For facilities that discharge demineralization
3 concentrate, the failure of whole effluent toxicity tests
4 predominately due to the presence of constituents naturally
5 occurring in the source water, limited to calcium, potassium,
6 sodium, magnesium, chloride, bromide, and other constituents
7 designated by the department, shall not be the basis for
8 denial of a permit, denial of a permit renewal, revocation of
9 a permit, or other enforcement action by the department, as
10 long as the volume of water necessary to achieve water quality
11 standards is available within a distance not in excess of two
12 times the natural water depth at the point of discharge under
13 all flow conditions.

14 (b) In the event failure of whole effluent toxicity
15 tests is due predominately to the presence of the naturally
16 occurring constituents identified in paragraph (a), or
17 designated by the department pursuant to paragraph (a), the
18 department shall issue a permit for the demineralization
19 concentrate discharge, if:

20 1. The volume of water necessary to achieve water
21 quality standards is available within a distance not in excess
22 of two times the natural water depth at the point of discharge
23 under all flow conditions; and

24 2. All other permitting requirements are met.

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26 A variance for toxicity under the circumstance described in
27 this paragraph shall not be required.

28 (c) Facilities that fail to meet the requirements of
29 this subsection may be permitted in accordance with department
30 rule, including all applicable moderating provisions such as
31 variances, exemptions, and mixing zones.

1 (5) Blending of demineralization concentrate with
2 reclaimed water shall be allowed in accordance with the
3 department's reuse rules.

4 (6) This subsection applies only to small water
5 utility businesses.

6 (a) The discharge of demineralization concentrate from
7 small water utility businesses shall be presumed to be
8 allowable and permittable in all waters in the state, if:

9 1. The discharge meets the effluent limitations in s.
10 403.086(4), except that high-level disinfection shall not be
11 required unless the presence of fecal coliforms in the source
12 water will result in the discharge not meeting applicable
13 water quality standards;

14 2. The discharge of demineralization concentrate
15 achieves a minimum of 4-to-1 dilution within a distance not in
16 excess of two times the natural water depth at the point of
17 discharge under all flow conditions; and

18 3. The point of discharge is located at a reasonably
19 accessible point that minimizes water quality impacts to the
20 greatest extent possible.

21 (b) The presumption in paragraph (a) that the
22 discharge of demineralization concentrate from a small water
23 utility is allowable and permittable may be overcome only by a
24 demonstration that one or more of the following conditions are
25 present:

26 1. The discharge will be made directly into an
27 Outstanding Florida Water, except as provided in chapter
28 90-262, Laws of Florida.

29 2. The discharge will be made directly to Class I or
30 Class II waters.

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1 3. The discharge will be made to a water body having a
2 total maximum daily load established by the department and the
3 discharge will cause or contribute to a violation of the
4 established load.

5 4. The discharge fails to meet the requirements of the
6 antidegradation policy contained in the department rules.

7 5. The discharge will be made to a sole-source
8 aquifer.

9 6. The discharge fails to meet applicable surface
10 water and groundwater quality standards.

11 7. The results of any toxicity test performed by the
12 applicant under paragraph (d) or by the department indicate
13 the discharge does not meet toxicity requirements at the
14 boundary of the mixing zone under subparagraph (a)2.

15 (c) If one or more of the conditions in paragraph (b)
16 has been demonstrated, the department may:

17 1. Require more stringent effluent limitations;

18 2. Require relocation of the discharge point or a
19 change in the method of discharge;

20 3. Limit the duration or volume of the discharge; or

21 4. Prohibit the discharge if there is no alternative
22 that meets the conditions of subparagraphs 1.-3.

23 (d) For facilities owned by small water utility
24 businesses, the department shall not:

25 1. Require such businesses to perform toxicity testing
26 at other than the time of permit application, permit renewal,
27 or any requested permit modification, unless the initial
28 toxicity test or any subsequent toxicity test performed by the
29 department does not meet toxicity requirements.

30 2. Require such businesses to obtain a
31 water-quality-based effluent limitation determination.

1 (7) The department may adopt additional rules for the
2 regulation of demineralization and to implement the provisions
3 of this section and s. 403.061(11)(b).

4 Section 2. Paragraph (b) of subsection (11) of section
5 403.061, Florida Statutes, is amended to read:

6 403.061 Department; powers and duties.--The department
7 shall have the power and the duty to control and prohibit
8 pollution of air and water in accordance with the law and
9 rules adopted and promulgated by it and, for this purpose, to:

10 (11) Establish ambient air quality and water quality
11 standards for the state as a whole or for any part thereof,
12 and also standards for the abatement of excessive and
13 unnecessary noise. The department is authorized to establish
14 reasonable zones of mixing for discharges into waters.

15 (b) No mixing zone for point source discharges shall
16 be permitted in Outstanding Florida Waters except for:

17 1. Sources which have received permits from the
18 department prior to April 1, 1982, or the date of designation,
19 whichever is later.†

20 2. Blowdown from new power plants certified pursuant
21 to the Florida Electrical Power Plant Siting Act.†~~and~~

22 3. Discharges of water necessary for water management
23 purposes which have been approved by the governing board of a
24 water management district and, if required by law, by the
25 secretary.

26 4. The discharge of demineralization concentrate which
27 has been determined permittable under s. 403.0882 and which
28 meets the specific provisions of s. 403.0882(4)(a) and (b), if
29 the proposed discharge is clearly in the public interest.

30 Section 3. Section 403.065, Florida Statutes, is
31 created to read:

1 403.065 Aquifer storage and recovery wells.--
2 (1) The Legislature finds and declares that it is in
3 the public interest to conserve and protect water resources,
4 provide adequate water supplies, provide for natural systems,
5 and promote quality aquifer storage and recovery projects by
6 removing inappropriate institutional barriers.
7 (2) Aquifer storage and recovery wells shall be
8 classified and permitted according to department rules,
9 consistent with the federal Safe Drinking Water Act. Such
10 wells shall be constructed to prevent violation of state
11 ground water quality standards at the point of discharge,
12 except as specifically provided in this section.
13 (3) Aquifer storage and recovery wells shall be
14 allowed a zone of discharge for sodium and secondary drinking
15 water standards, provided the requirements of paragraphs
16 (4)(b), (c), and (d) and subsection (6) are met.
17 (4) Aquifer storage and recovery wells, except those
18 that inject reclaimed water as provided in department rule,
19 shall be allowed a zone of discharge for total coliform
20 bacteria when the applicant for the aquifer storage and
21 recovery well permit demonstrates, through a risk-based
22 analysis, the following:
23 (a) The ground water that will be affected by the zone
24 of discharge contains no less than 1,500 milligrams per liter
25 total dissolved solids.
26 (b) The ground water within the zone of discharge is
27 not currently being used nor is it reasonably expected to be
28 used as a public or private drinking water supply, except by
29 the permit applicant.
30 (c) The presence of the stored water shall not cause
31 any person other than the permit applicant to treat its source

1 water in any way that would not have been required in the
2 absence of the aquifer storage and recovery well.

3 (d) The department has approved a monitoring plan that
4 specifies the number and location of monitor wells, monitoring
5 parameters, and frequency of monitoring.

6 (e) Total coliform bacteria is the only primary
7 drinking water standard other than sodium that will not be met
8 prior to injection.

9 (f) The permit applicant demonstrates that biological
10 contaminants will experience die-off such that primary
11 drinking water standards will be met at the edge of the zone
12 of discharge and that those contaminants will not pose an
13 adverse risk to human health.

14 (g) The permit applicant documents the environmental
15 benefits to be derived from the storage, recovery, and future
16 use of the injected water.

17 (h) The use of the recovered water is consistent with
18 its intended primary purpose.

19 (i) The storage of water shall not endanger drinking
20 water sources, as defined in the federal Safe Drinking Water
21 Act, 42 U.S.C. ss. 300h.

22 (5) The department may allow a zone of discharge for
23 sodium, total coliform bacteria, and secondary drinking water
24 standards if the total dissolved solids concentration in the
25 affected ground water is less than 1,500 milligrams per liter
26 and if the requirements of paragraphs (4)(c)-(i) are
27 satisfied, and:

28 (a) The applicant for the aquifer storage and recovery
29 well permit demonstrates that ground water within the zone of
30 discharge is not currently being used and cannot in the future
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1 be used as a public or private drinking water supply except by
2 the permit applicant.

3 (b) The permit applicant provides written notice,
4 including specific information about the proposed aquifer
5 storage and recovery project, to each landowner whose property
6 overlies the zone of discharge.

7 (6) A zone of discharge for aquifer storage and
8 recovery wells shall not intersect or include any part of a
9 500-foot radius surrounding any well that uses the injection
10 zone to supply drinking water.

11 (7) The department shall specify in the permit for the
12 aquifer storage and recovery well the vertical and lateral
13 limits of the approved zone of discharge. Compliance with the
14 primary drinking water standard for total coliform bacteria,
15 sodium, and the secondary drinking water standards shall be
16 required at the edge of the zone of discharge.

17 (8) After the aquifer storage and recovery well is in
18 operation, ground water monitoring must demonstrate that
19 biological die-off is occurring, no exceedances of the primary
20 drinking water standards have occurred outside of the zone of
21 discharge, and there is no adverse risk to human health from
22 the injection activity. Failure of the applicant to make this
23 demonstration shall result in revocation of the zone of
24 discharge.

25 (9) If drinking water supply wells are present in the
26 injection zone within 2.5 miles of the edge of the zone of
27 discharge, additional monitor wells may be required to detect
28 the possible movement of injected fluids in the direction of
29 the drinking water wells.

30 (10) Monitor wells shall be sampled at least monthly
31 for the parameters specified in the permit for the aquifer

1 storage and recovery well. The department may modify the
2 monitoring requirements if necessary to provide reasonable
3 assurance that underground sources of drinking water are
4 adequately protected.

5 (11) An aquifer exemption shall be obtained prior to
6 injection if the injection fluid exceeds any primary drinking
7 water standard maximum contaminant level other than total
8 coliform bacteria or sodium, or if the injection fluid
9 contains constituents that may adversely affect the health of
10 persons.

11 (12) The department shall make a reasonable effort to
12 issue or deny a permit within 90 days after determining the
13 permit application to be complete. In accordance with s.
14 403.0876(2)(b), the failure of the department to issue or deny
15 a permit for an underground injection well within the 90-day
16 time period shall not result in the automatic issuance or
17 denial of the permit and shall not prevent the inclusion of
18 specific permit conditions which are necessary to ensure
19 compliance with applicable statutes and rules.

20 (13) The department may adopt rules for the regulation
21 of aquifer storage and recovery wells to implement the
22 provisions of this section.

23 Section 4. This act shall take effect upon becoming a
24 law.

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